

SCORE Search Results Details for Application 10591347 and Search Result 20110506_133209_us-10-591-347-2.rni.

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This page gives you Search Results detail for the Application 10591347 and Search Result 20110506_133209_us-10-591-347-2.rni.

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OM nucleic - nucleic search, using sw model

Run on: May 6, 2011, 13:32:38 ; Search time 1342 Seconds
(without alignments)
29278.208 Million cell updates/sec

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Gapop 10.0 , Gapext 1.0

Searched: 21130652 seqs, 5737639395 residues

Total number of hits satisfying chosen parameters: 42261304

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Issued_Patents_NA*
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| 7 | 3236.8 | 94.5 | 3240 | 2 | US-08-162-081B-34 | Sequence 34, Appl |
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| 21 | 460.8 | 13.5 | 3213 | 3 | US-09-949-016-5450 | Sequence 5450, Ap |
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| c 44 | 329.8 | 9.6 | 7135 | 11 | US-11-443-428A-621128 | Sequence 621128, |
| c 45 | 329.8 | 9.6 | 8165 | 11 | US-11-443-428A-621102 | Sequence 621102, |

ALIGNMENTS

RESULT 1

US-08-162-081B-32

; Sequence 32, Application US/08162081B

; Patent No. 5824492

GENERAL INFORMATION:

APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
 APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
 APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
 APPLICANT: Stefano; Gout, Ivan Tarasovitch
 TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
 TITLE OF INVENTION: THEIR PREPARATION AND USE

NUMBER OF SEQUENCES: 50

CORRESPONDENCE ADDRESS:

ADDRESSEE: Felfe & Lynch
 STREET: 805 Third Avenue
 CITY: New York
 STATE: New York
 COUNTRY: USA
 ZIP: 10022

COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
 COMPUTER: IBM PS/2
 OPERATING SYSTEM: PC-DOS
 SOFTWARE: Wordperfect

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/162,081B
 FILING DATE: February 7, 1994

CLASSIFICATION: 435

PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/GB93/00761
 FILING DATE: 13 April 1993

ATTORNEY/AGENT INFORMATION:

NAME: Pasqualini, Patricia A.
 REGISTRATION NUMBER: 34,894

REFERENCE/DOCKET NUMBER: LUD 5256

TELECOMMUNICATION INFORMATION:

TELEPHONE: (212) 688-9200

TELEFAX: (212) 838-3884

INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:

LENGTH: 3412 base pairs

TYPE: nucleic acid

STRANDEDNESS: single or double

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;      TOPOLOGY: linear
;      FEATURE:
;      NAME/KEY: CDS
;      LOCATION: 1..3204
;      OTHER INFORMATION: /standard_name= "CDS"
US-08-162-081B-32

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Best Local Similarity 99.9%; 
Matches 3409; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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| | | | |
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| Qy | 1153 | CCCAGGTGGAATGAACTGGCTGAATTATGATATACTACATTCTGATCTCCCGTGTGCT | 1212 |
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| Qy | 1213 | CGACTTGCCTTCATTGCTGTTAAAGGCCGAAAGGGTGTCAAAGAGGAACACTGT | 1272 |
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| Qy | 1273 | CCATTGGCATGGGAAATAAACTTGTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
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| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
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| Db | 1561 | AATGAAATTAAAGGAAATGACAAGAACGCTCAAAGCAATTCTACACGAGATCTCTC | 1620 |
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RESULT 2

US-08-780-872-32

; Sequence 32, Application US/08780872

; Patent No. 5846824
; GENERAL INFORMATION:
; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
; TITLE OF INVENTION: THEIR PREPARATION AND USE
; NUMBER OF SEQUENCES: 50
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Felfe & Lynch
; STREET: 805 Third Avenue
; CITY: New York
; STATE: New York
; COUNTRY: USA
; ZIP: 10022
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/780,872
; FILING DATE: 09-JAN-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Pasqualini, Patricia A.
; REGISTRATION NUMBER: 34,894
; REFERENCE/DOCKET NUMBER: LUD 5256
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 688-9200
; TELEFAX: (212) 838-3884
; INFORMATION FOR SEQ ID NO: 32:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3412 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single or double
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..3204
; OTHER INFORMATION: /standard_name= "CDS"
US-08-780-872-32

Query Match 99.5%; Score 3407.2; DB 2; Length 3412;
Best Local Similarity 99.9%;
Matches 3409; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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|----|---|-----|
| Qy | 13 ATGCTTCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTATGCCCAAGAACATC | 72 |
| Db | 1 ATGCTTCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTATGCCCAAGAACATC | 60 |
| Qy | 73 CTAGTGGAAATGTTACTACCAAATGGAATGAGTAGTGACTTTAGAATGCCCTCCGTGAGGCT | 132 |
| Db | 61 CTAGTGGAAATGTTACTACCAAATGGAATGAGTAGTGACTTTAGAATGCCCTCCGTGAGGCT | 120 |
| Qy | 133 ACATTAGTAACTATAAACGATGAACATTAAAGAAGCAAGAAAATACCCCTCTCCATCAA | 192 |
| Db | 121 ACATTAGTAACTATAAACGATGAACATTAAAGAAGCAAGAAAATACCCCTCTCCATCAA | 180 |
| Qy | 193 CTTCTTCAAGATGAATCTTCTACATTTCGTAAGTGTACCCAAGAAGCAGAAAAGGGAA | 252 |
| Db | 181 CTTCTTCAAGATGAATCTTCTACATTTCGTAAGTGTACCCAAGAAGCAGAAAAGGGAA | 240 |
| Qy | 253 GAATTTTTGATGAAACAGACGACTTTGTATCTCGGCTTTCAACCATTAAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAGACGACTTTGTATCTCGGCTTTCAACCATTAAAAA | 300 |
| Qy | 313 GTAATTGAAACAGTAGGCACCGTGAAGAAAAGATCCTAACATCGAGAAATTGGTTTGCT | 372 |
| Db | 301 GTAATTGAAACAGTAGGCACCGTGAAGAAAAGATCCTAACATCGAGAAATTGGTTTGCT | 360 |
| Qy | 373 ATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCGGA | 432 |
| Db | 361 ATCGGCATGCCAGTGTGCGAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCGGA | 420 |

| | | | |
|----|------|---|------|
| Qy | 433 | AGAAATATTCTTAATGTTGAAAGAGCTGTGGATCTTAGGGATCTTAAATTCACTCAT | 492 |
| Db | 421 | AGAAATATTCTTAATGTTGAAAGAGCTGTGGATCTTAGGGATCTTAAATTCACTCAT | 480 |
| Qy | 493 | ACTAGACCAATCTATGCTATCCGCCACATCTAGAATCTCACCGAGCTGCCAAAGCAC | 552 |
| Db | 481 | AGTAGACCAATCTATGCTATCCGCCACATCTAGAATCTCACCGAGCTGCCAAAGCAC | 540 |
| Qy | 553 | ATATATAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAAATTGGATAGAGGCCAATAATAGTGGTGAATTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAAGTATACCTCTGAAAATCAACCATGACTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAAGCAGAAGTATACCTCTGAAAATCAACCATGACTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATTAAAAA | 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATTAAAAA | 720 |
| Qy | 733 | CTCTGTGTTTAGAATATCAGGGCAAGTCAGTACATTAAAAGTGTGGATGTGATGAATAC | 792 |
| Db | 721 | CTCTGTGTTTAGAATATCAGGGCAAGTCAGTACATTAAAAGTGTGGATGTGATGAATAC | 780 |
| Qy | 793 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAGCTGTATAATGCTGGG | 852 |
| Db | 781 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAGCTGTATAATGCTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGAGATGATGGCTAAAGAAAGCCTTATTCTCAACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAGATGATGGCTAAAGAAAGCCTTATTCTCAACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATCTTATCCAGACGCCATTCCACAGCTACACCATAATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATCTTATCCAGACGCCATTCCACAGCTACACCATAATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGGTATAAAATAGAGCAGTCAAGATAAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGGTATAAAATAGAGCAGTCAAGATAAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATTCTCAGAGACATGACAAGATTATGTTGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATTCTCAGAGACATGACAAGATTATGTTGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCCCTTATGTGACAATGTGAAACACTCAAAGAGTACCTTGTCCAA | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCCCTTATGTGACAATGTGAAACACTCAAAGAGTACCTTGTCCAA | 1140 |
| Qy | 1153 | CCCAGGTGAATGTTGCTGAATTATGATATACATTCTGTATCTCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGAATGTTGCTGAATTATGATATACATTCTGTATCTCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTGTAAAGGCCGAAAGGGTGTCAAAGAGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTGTAAAGGCCGAAAGGGTGTCAAAGAGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAGAAACTCCATGCTTAGAGTTGGAGTTGACTGTT | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAGAAACTCCATGCTTAGAGTTGGAGTTGACTGTT | 1440 |
| Qy | 1453 | AGCAGTGTGTTAAACTCCAGATATGTCAGTGATTGAAGAGCATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGTGTTAAACTCCAGATATGTCAGTGATTGAAGAGCATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCCAGAACCGAGATTAGCTATCCACGCCAGGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCCAGAACCGAGATTAGCTATCCACGCCAGGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAGGGAAATGACAAAGAACAGCTCAAAGCAATTCTACACGAGATCTCTC | 1632 |
| Db | 1561 | AATGAATTAAGGGAAATGACAAAGAACAGCTCAAAGCAATTCTACACGAGATCTCTC | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAGAAGATTCTATGGAGTCACAGACACTATTGTAAC | 1692 |

| | | | |
|----|------|--|------|
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAGATTCTCATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATCTACCCAAATTGCTCTGCTGTTAATGGAAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATCTACCCAAATTGCTCTGCTGTTAATGGAAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCGAGATGATTGCTGGTAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCGAGATGATTGCTGGTAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAAATTACCCAGATCCTATGGTTGAGGTTTGCCTGGCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAAATTACCCAGATCCTATGGTTGAGGTTTGCCTGGCTGGAA | 1860 |
| Qy | 1873 | AAATAATTAAACAGATGACAAACATTCTCAGTATTAAATTCTAGCTAGTACAGGCTCTAAA | 1932 |
| Db | 1861 | AAATAATTAAACAGATGACAAACATTCTCAGTATTAAATTCTAGCTAGTACAGGCTCTAAA | 1920 |
| Qy | 1933 | TATGAAACATAATTGGATAACTTGCTTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1992 |
| Db | 1921 | TATGAAACATAATTGGATAACTTGCTTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGCRAFTTTCTTGGCATTAAATCTGAGATGCACAATAAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGCRAFTTTCTTGGCATTAAATCTGAGATGCACAATAAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTTGGCCTGCTTTGGAGTCTATTGTCGTGCTATGTGGATGTTTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTTGGCCTGCTTTGGAGTCTATTGTCGTGCTATGTGGATGTTTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTTAACCTTAACCTGACATTCTCAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTTAACCTTAACCTGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAGATTTCATGGATGCCCTACAGGGCTTGCTGTCCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAGATTTCATGGATGCCCTACAGGGCTTGCTGTCCTCTAAACCCCTGTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2472 |
| Db | 2401 | TTTAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2460 |
| Qy | 2473 | GAAAAATATCTGCCAAAATCAAGGTCTTGATCTTCAAGTGTACCTTATGGTTCTGTCA | 2532 |
| Db | 2461 | GAAAAATATCTGCCAAAATCAAGGTCTTGATCTTCAAGTGTACCTTATGGTTCTGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATTGAGGTGTTGCGAAATTCCTCACACTATTGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATTGAGGTGTTGCGAAATTCCTCACACTATTGCAAATT | 2580 |
| Qy | 2593 | CAGTGCCTAAAGGGGGCTTGAAGAGGTGCAACTGCAGTTCACAGGCCACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGCCTAAAGGGGGCTTGAAGAGGTGCAACTGCAGTTCACAGGCCACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAGACAAGAACAAAGGAGAAATATGATGCGCCATTGACCTGTTACACCTTC | 2712 |
| Db | 2641 | CTCAAGACAAGAACAAAGGAGAAATATGATGCGCCATTGACCTGTTACACCTTC | 2700 |
| Qy | 2713 | TGTGCTGGATACGTGTAGTACCTCTATTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACGTGTAGTACCTCTATTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTGAAGAGCGATGCAACTGTGTTCATATAGATTGGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTGAAGAGCGATGCAACTGTGTTCATATAGATTGGACACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAAGAAAAATTGGTATAAACGAGAACGTGIGCCATTGTTGACACAGGATTIC | 2892 |

| | | | |
|----|------|--|------|
| Db | 2821 | AAGAAGAAAAATTGGTTAACAGAGAACGTGTGCCATTGTTTGACACAGGATTTC | 2880 |
| Qy | 2893 | TTAATAGTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAATTGAGAGGTTT | 2952 |
| Db | 2881 | TTAATAGTAGTAAAGGAGCCAAAGAATGCACAAAGACAAGAGAATTGAGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTTCATAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTTCATAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTGTGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACTACAATCTTGTGACATTGCA | 3060 |
| Qy | 3073 | TACATTGAAAGACCCCTAGCCTTAGATAAAAAGCTGAGCAAGGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTGAAAGACCCCTAGCCTTAGATAAAAAGCTGAGCAAGGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAATGAATGATGCCACATCATGGGCTCTGGAACACAAAAATGGATGGATCTCCAC | 3192 |
| Db | 3121 | AAACAATGAATGATGCCACATCATGGGCTCTGGAACACAAAAATGGATGGATCTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3252 |
| Db | 3181 | ACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3240 |
| Qy | 3253 | TTCCACACTGCACTTTAAACTCTCACGAGGCAAAGCCGATTGCACTAGGAATTGAC | 3312 |
| Db | 3241 | CACTACACTGCACTTTAAACTCTCACGAGGCAAAGCCGATTGCACTAGGAATTGAC | 3300 |
| Qy | 3313 | AATCCATGAACAGCATTAGATTACAGCAAGAACAGAAAATAAACTATATAATTAAA | 3372 |
| Db | 3301 | AATCCATGAACAGCATTAGATTACAGCAAGAACAGAAAATAAACTATATAATTAAA | 3360 |
| Qy | 3373 | TAATGTAACCCAAACAGGGTTGTAGACTTAAACTAGTTCATTTCAAAA | 3424 |
| Db | 3361 | TAATGTAACCCAAACAGGGTTGTAGACTTAAACTAGTTCATTTCAAAA | 3412 |

RESULT 3

US-09-085-957-32

; Sequence 32, Application US/09085957

; Patent No. 6274327

GENERAL INFORMATION:

; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
; TITLE OF INVENTION: THEIR PREPARATION AND USE
; NUMBER OF SEQUENCES: 50

CORRESPONDENCE ADDRESS:

; ADDRESSEE: Feife & Lynch
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; ZIP: 10022

COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect

CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/085,957
; FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/780,872
; FILING DATE: 09-JAN-1997
; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993

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;
; INFORMATION FOR SEQ_ID NO: 32:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3412 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single or double
; TOPOLOGY: linear
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 1..3204
; OTHER INFORMATION: /standard_name= "CDS"
US-09-085-957-32
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Query Match          99.5%; Score 3407.2; DB 3; Length 3412;
Best Local Similarity 99.9%; Matches 3409; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
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| | | |
|----|---|------|
| Qy | 13 ATGCCCTCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTGCCCCAAGAAC | 72 |
| Db | 1 ATGCCCTCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTGCCCCAAGAAC | 60 |
| Qy | 73 CTAGTGGATGTTACTACCAAATGGATGAGTAGTGACTTTAGAATGCCTCCGTGAGG | 132 |
| Db | 61 CTAGTGGATGTTACTACCAAATGGATGAGTAGTGACTTTAGAATGCCTCCGTGAGG | 120 |
| Qy | 133 ACATTAGTAACATAAACCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 192 |
| Db | 121 ACATTAGTAACATAAACCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 180 |
| Qy | 193 CTTCTTCAGATGAATCTCTTACATTTCGTAAGTGTACCCAAGAAGCAGAAAGGG | 252 |
| Db | 181 CTTCTTCAGATGAATCTCTTACATTTCGTAAGTGTACCCAAGAAGCAGAAAGGG | 240 |
| Qy | 253 GAATTTTTGATGAAACAAGACGACTTTGTGATCTCGGTTTTCAACCATTAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAAGACGACTTTGTGATCTCGGTTTTCAACCATTAAAA | 300 |
| Qy | 313 GTAATTGAAACCGTAGGCAACCGTGAAGAAAAGATCCTAACCGAAGAAAATTGGTT | 372 |
| Db | 301 GTAATTGAAACCGTAGGCAACCGTGAAGAAAAGATCCTAACCGAAGAAAATTGGTT | 360 |
| Qy | 373 ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCG | 432 |
| Db | 361 ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCG | 420 |
| Qy | 433 AGAAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAAAGGATCTTAAATTCA | 492 |
| Db | 421 AGAAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAAAGGATCTTAAATTCA | 480 |
| Qy | 493 AGTAGAGCAATGTATGCTATCCGCCACATGTAGAACTTCCACCGAGCTGCCAAAGCAC | 552 |
| Db | 481 AGTAGAGCAATGTATGCTATCCGCCACATGTAGAACTTCCACCGAGCTGCCAAAGCAC | 540 |
| Qy | 553 ATATATAAATTGGATAGAGGCCAAATAATAGTGGTATTTGGTAATAGTTCTCCA | 612 |
| Db | 541 ATATATAAATTGGATAGAGGCCAAATAATAGTGGTATTTGGTAATAGTTCTCCA | 600 |
| Qy | 613 AATAATGACAAGCAGAACTATCTGGAAAATCAACCATGACTGTGTGCCAGAACAGTA | 672 |
| Db | 601 AATAATGACAAGCAGAACTATCTGGAAAATCAACCATGACTGTGTGCCAGAACAGTA | 660 |
| Qy | 673 ATTGCTGAAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAAATTAAA | 732 |
| Db | 661 ATTGCTGAAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAAATTAAA | 720 |
| Qy | 733 CTCTGTGTTTAAAGAATACAGGGCAAGTACATTAAAAGTGTGTGGATGTGATAAC | 792 |
| Db | 721 CTCTGTGTTTAAAGAATACAGGGCAAGTACATTAAAAGTGTGTGGATGTGATAAC | 780 |
| Qy | 793 TTCCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAACGCTGTATAATGCTGG | 852 |
| Db | 781 TTCCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAACGCTGTATAATGCTGG | 840 |
| Qy | 853 AGGATGCCAAATTGAAGATGATGGCTAAAGAACGCTTATTCTCAACTGCCAATGGAC | 912 |
| Db | 841 AGGATGCCAAATTGAAGATGATGGCTAAAGAACGCTTATTCTCAACTGCCAATGGAC | 900 |
| Qy | 913 TGTGTTTAAATGCCATCTTATCCAGACGCCATTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 TGTGTTTAAATGCCATCTTATCCAGACGCCATTCCACAGCTACACCATATATGAATGGA | 960 |
| Qy | 973 GAAACATCTACAAAATCCCTTGGGTTATAATAGAGCACTCAGAATAAAAATTCTTG | 1032 |

| | | | |
|----|------|---|------|
| Db | 961 | GAAACATCTACAAAATCCCTTGGTTATAAATAGAGCCTCAGAATAAAATTCTTG | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATTCGAGACATTGACAAGATTATGTTCGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATTCGAGACATTGACAAGATTATGTTCGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCCTTATGTGACAATGTGAAACTCAAAGAGTACCTTGTCCAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCCTTATGTGACAATGTGAAACTCAAAGAGTACCTTGTCCAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGATGGCTGAATTATGATATATACATTCTGTATCTCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGATGGCTGAATTATGATATATACATTCTGTATCTCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTTGCCCTTCCATTGCTGTAAAGGCCGAAAGGGTGTCTAAAGAGAACACTGT | 1272 |
| Db | 1201 | CGACTTTGCCCTTCCATTGCTGTAAAGGCCGAAAGGGTGTCTAAAGAGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAATATAACTGTTGATTACACGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAATATAACTGTTGATTACACGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAAGAACACTCCATGCCTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAAGAACACTCCATGCCTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGTGGTAAGCTCCAGATATGTCAGTGATTGAAGAGCATGCCATTGGCTGT | 1512 |
| Db | 1441 | AGCAGTGTGGTAAGCTCCAGATATGTCAGTGATTGAAGAGCATGCCATTGGCTGT | 1500 |
| Qy | 1513 | TCCCAGAGCAGGATTAGCTATTCCACGCCAGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCAGAGCAGGATTAGCTATTCCACGCCAGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAAGGAAATGACAAAAGACAGCTCAAGCAATTCTACACGAGATCTCTC | 1632 |
| Db | 1561 | AATGAATTAAAGGAAATGACAAAAGACAGCTCAAGCAATTCTACACGAGATCTCTC | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTTCTGTGTAAATTGAAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTTCTGTGTAAATTGAAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCAGATGTATTGCTTGGTAAAGATTGGCTTCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCAGATGTATTGCTTGGTAAAGATTGGCTTCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCTTGGTTGGAGTTTGTCTGGTCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCTTGGTTGGAGTTTGTCTGGTCTGGAA | 1860 |
| Qy | 1873 | AAATTTAACAGATGACAAACTTTCTCAGTATTAAATTCTAGCTACTACAGGTCTAAAA | 1932 |
| Db | 1861 | AAATTTAACAGATGACAAACTTTCTCAGTATTAAATTCTAGCTACTACAGGTCTAAAA | 1920 |
| Qy | 1933 | TATGAACAATTGGATAACTGCTTGTGAGATTTTACTGAAGAAACCTGACTTAAT | 1992 |
| Db | 1921 | TATGAACAATTGGATAACTGCTTGTGAGATTTTACTGAAGAAACCTGACTTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTCTTGGCATTAAATCTGAGATGCACAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGGCACTTTCTTGGCATTAAATCTGAGATGCACAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCTGTTGGAGTCTATTGTCGTGATGTTGGAGTTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTGGCTGTTGGAGTCTATTGTCGTGATGTTGGAGTTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTATTAACTTAACCTGACATTCTCAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTATTAACTTAACCTGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2232 |

| | | | |
|----|------|--|------|
| Db | 2161 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTTAGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAAGATTTCATGGATGCCCTACAGGGCTTGCCTGCTCCCTAACCCCTGCTCATCAA | 2292 |
| Db | 2221 | CGACCAAGATTTCATGGATGCCCTACAGGGCTTGCCTGCTCCCTAACCCCTGCTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGCTTCTGCAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGCTTCTGCAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAAATTGGGAGAACCCAGACATCATGTCAAGAGTTACTGTTTCAAGAACATGAGATCATC | 2412 |
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| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGAATATGCTAACACTTCAAAATTATTCGTAATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGAATATGCTAACACTTCAAAATTATTCGTAATTATG | 2460 |
| Qy | 2473 | GAAATATCTGCCAATCAAGGCTTGTATCTTCAAGTTTACCTTATGGTTCTGTCA | 2532 |
| Db | 2461 | GAAATATCTGCCAATCAAGGCTTGTATCTTCAAGTTTACCTTATGGTTCTGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATTGAGGTGGTGCRAATTCACACTATTATGCAAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATTGAGGTGGTGCRAATTCACACTATTATGCAAAATT | 2580 |
| Qy | 2593 | CAGTCCAAGGCCGTTGAAAGGTGCACTGCAGTTCAACAGGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTCCAAGGCCGTTGAAAGGTGCACTGCAGTTCAACAGGCCACACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAAGACAAGAACAAAGGAGAAAATATGATGCAGCCATTGACCTGTTACAGTTCA | 2712 |
| Db | 2641 | CTCAAAAGACAAGAACAAAGGAGAAAATATGATGCAGCCATTGACCTGTTACAGTTCA | 2700 |
| Qy | 2713 | TGTGCTGATACTGTGTAGCTACCTTCATTTGGAAITGGAGATGTCACAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGATACTGTGTAGCTACCTTCATTTGGAAITGGAGATGTCACAATAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGGACAACCTGTTCATATAGATTTGCACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGGACAACCTGTTCATATAGATTTGCACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAAATTGGTTAAACGAGAACGTTGCCCCATTGTTTGCACAGGATTTC | 2892 |
| Db | 2821 | AAGAAGAAAAAATTGGTTAAACGAGAACGTTGCCCCATTGTTTGCACAGGATTTC | 2880 |
| Qy | 2893 | TTAATAGTAGTTAGTAAGGAGGCCAAGAACATGCAACAAAGACAAGGAATTGAGAGTTT | 2952 |
| Db | 2881 | TTAATAGTAGTTAGTAAGGAGGCCAAGAACATGCAACAAAGACAAGGAATTGAGAGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTTACAAGGTTATCTAGCTATTGACAGCATGCCAATCTTCATAAAAT | 3012 |
| Db | 2941 | CAGGAGATGTTACAAGGTTATCTAGCTATTGACAGCATGCCAATCTTCATAAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATCTGGCTCTGGAATGCCAGAACATCAATCTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATCTGGCTCTGGAATGCCAGAACATCAATCTTGATGACATTGCA | 3060 |
| Qy | 3073 | TACATTGCAAAGACCTAGCCTTAGATAAAACTGAGCAAGGGCTTGGAGATTTCTATG | 3132 |
| Db | 3061 | TACATTGCAAAGACCTAGCCTTAGATAAAACTGAGCAAGGGCTTGGAGATTTCTATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCCACATCATGGTGGCTGGACAACAAAAATGGATTGATCTTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCCACATCATGGTGGCTGGACAACAAAAATGGATTGATCTTCCAC | 3180 |
| Qy | 3193 | ACAAATAAACGATGCACTGAACTGAAAGATACTGAGAAAATGAAAGCTACTCTGGA | 3252 |
| Db | 3181 | ACAAATAAACGATGCACTGAAAGATACTGAGAAAATGAAAGCTACTCTGGA | 3240 |
| Qy | 3253 | TTCCACACTGCACTTTAAACTCTCAGCAGGCAAGACCGATTGCAAGGAATTGCAAC | 3312 |
| Db | 3241 | CACTACACTGCACTTTAAACTCTCAGCAGGCAAGACCGATTGCAAGGAATTGCAAC | 3300 |
| Qy | 3313 | AATCCATGAACAGCATGATGAACTGAAAGATACTGAGAAAATGAAAGCTACTCTGGA | 3372 |
| Db | 3301 | AATCCATGAACAGCATGATGAACTGAAAGATACTGAGAAAATGAAAGCTACTCTGGA | 3360 |
| Qy | 3373 | TAATGTTAAACGCCAACAGGGTTGATAGGACTTTAACTAGTTCAATTCAAAA | 3424 |
| Db | 3361 | TAATGTTAAACGCCAACAGGGTTGATAGGACTTTAACTAGTTCAATTCAAAA | 3412 |

RESULT 4
US-09-325-095-32
Sequence 32, Application US/09325095
Patent No. 7422849

GENERAL INFORMATION:
APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
APPLICANT: Balai; Waterfield, Michael Derek; Parker, Peter
APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
APPLICANT: Stefano; Gout, Ivan Tarasovitch
TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
TITLE OF INVENTION: THEIR PREPARATION AND USE
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felife & Lynch
STREET: 805 Third Avenue
CITY: New York
STATE: New York
COUNTRY: USA
ZIP: 10022

COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
COMPUTER: IBM PS/2
OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/325,095
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/085,957
FILING DATE:
APPLICATION NUMBER: 08/780,872
FILING DATE: 09-JAN-1997
APPLICATION NUMBER: 08/162,081
FILING DATE: February 7, 1994
APPLICATION NUMBER: PCT/GB93/00761
FILING DATE: 13 April 1993

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NAME: Pasqualini, Patricia A.
REGISTRATION NUMBER: 34,894
REFERENCE/DOCKET NUMBER: LUD 5256

TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
TELEFAX: (212) 838-3884

INFORMATION FOR SEQ ID NO: 32:

SEQUENCE CHARACTERISTICS:
LENGTH: 3412 base pairs
TYPE: nucleic acid
STRANDEDNESS: single or double
TOPOLOGY: linear

FEATURE:
NAME/KEY: CDS
LOCATION: 1..3204
OTHER INFORMATION: /standard_name= "CDS"

US-09-325-095-32

Query Match 99.5%; Score 3407.2; DB 8; Length 3412;
Best Local Similarity 99.9%;
Matches 3409; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

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| Qy | 13 ATGCCCTCAAAGACCATCATCAGGTGAACACTGTTGGGCATCCACTTGTATGCCCTAAAGAACATC | 72 |
| Db | 1 ATGCCCTCAAAGACCATCATCAGGTGAACACTGTTGGGCATCCACTTGTATGCCCTAAAGAACATC | 60 |
| Qy | 73 CTAGTGGAAATGTTACTACCAAAATGGAAATGATAGTGACTTTAGAATGCCCTCGTGAGGCT | 132 |
| Db | 61 CTAGTGGAAATGTTACTACCAAAATGGAAATGATAGTGACTTTAGAATGCCCTCGTGAGGCT | 120 |
| Qy | 133 ACATTTAGTAACATAAACGATGAACATTAAAGAAGCAAGAAAATACCCCTCTCCATCAA | 192 |
| Db | 121 ACATTTAGTAACATAAACGATGAACATTAAAGAAGCAAGAAAATACCCCTCTCCATCAA | 180 |
| Qy | 193 CTTCTTCAGATGAACCTCTTACATTTCTGAAGTGTACCCAAAGAAGCAGAAAGGGAA | 252 |
| Db | 181 CTTCTTCAGATGAACCTCTTACATTTCTGAAGTGTACCCAAAGAAGCAGAAAGGGAA | 240 |
| Qy | 253 GAATTTTTGATGAAACAGACGACTTTGTGATCTTCGGCTTTCAACCATTAAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAGACGACTTTGTGATCTTCGGCTTTCAACCATTAAAAA | 300 |

| | | | |
|----|------|---|------|
| Qy | 313 | GTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCCTAATCGAGAAATTGGTTTGCT | 372 |
| Db | 301 | GTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCCTAATCGAGAAATTGGTTTGCT | 360 |
| Qy | 373 | ATCGGCATGCCAGTGTGCGAATTGATATGGTTAACGATCCTGAAGTCAGGACTTCGGA | 432 |
| Db | 361 | ATCGGCATGCCAGTGTGCGAATTGATATGGTTAACGATCCTGAAGTCAGGACTTCGGA | 420 |
| Qy | 433 | AGAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAAAGGATCTTAAACCATCAT | 492 |
| Db | 421 | AGAAATATTCTTAATGTTGTAAGAACGCTGTGGATCTTAAAGGATCTTAAACCATCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAACATCTCACAGAGCTGCCAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAACATCTCACAGAGCTGCCAAGCAC | 540 |
| Qy | 553 | ATATATAAATTGGATAGAGGCCAATAATAGTGTGATTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAAATTGGATAGAGGCCAATAATAGTGTGATTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAACAGTATACTCTGAAAATCAACCACATGACTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAAGCAGAACAGTATACTCTGAAAATCAACCACATGACTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAAGCAATCAGGAAAAAAACTAGAACATGTGCTATCATCTGAAACATTAAAA | 732 |
| Db | 661 | ATTGCTGAAAGCAATCAGGAAAAAAACTAGAACATGTGCTATCATCTGAAACATTAAAA | 720 |
| Qy | 733 | CTCTGTGTTTAAAGATATCAGGGCAAGTACATTAAAAGTGTGTTGATGTGATGAATAC | 792 |
| Db | 721 | CTCTGTGTTTAAAGATATCAGGGCAAGTACATTAAAAGTGTGTTGATGTGATGAATAC | 780 |
| Qy | 793 | TTCCCTAGAAAAATCTCTGAGTCAGTATAAGTATATAAGGCTGTATAATGCTTGGG | 852 |
| Db | 781 | TTCCCTAGAAAAATCTCTGAGTCAGTATAAGTATATAAGGCTGTATAATGCTTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGAGATGATGGCTAACGAAAGCCTTATTCTCAACTGCCATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAGATGATGGCTAACGAAAGCCTTATTCTCAACTGCCATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATTTCCAGACGCATTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATTTCCAGACGCATTCCACAGCTACACCATATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGGTTAAATAGAGCAGTCAAAGATAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGGTTAAATAGAGCAGTCAAAGATAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTTGAAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTTGAAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCCTTATGTGACAATGTGAAACACTCAAAGAGTACCTTGTCCAA | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCCTTATGTGACAATGTGAAACACTCAAAGAGTACCTTGTCCAA | 1140 |
| Qy | 1153 | CCCAGGTGAATGTGCTGAATTATGATATACATTCTGTATCTCTCTGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGAATGTGCTGAATTATGATATACATTCTGTATCTCTCTGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTGTAAAGGCCAAAGGGGTCTAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTGTAAAGGCCAAAGGGGTCTAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGACACTCTAGTATCTGAAAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGACACTCTAGTATCTGAAAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGAGTTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGAGTTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAGAACACTCATGCTTAGAGTTGGAGTTGACTGGTTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAGAACACTCATGCTTAGAGTTGGAGTTGACTGGTTC | 1440 |
| Qy | 1453 | AGCAGTGTGTAAGTCCAGATATGTCAGTGAATTGAGAACATGCCATTGCTGTGA | 1512 |
| Db | 1441 | AGCAGTGTGTAAGTCCAGATATGTCAGTGAATTGAGAACATGCCATTGCTGTGA | 1500 |

| | | | |
|----|------|---|------|
| Qy | 1513 | TCCCGAGAACGGAGATTAGCTATTCACGAGACTGAGTAAACAGACTAGTAGAGAC | 1572 |
| Db | 1501 | TCCCGAGAACGGAGATTAGCTATTCACGAGACTGAGTAAACAGACTAGTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAACGGAAAATGACAAGAACGCTCAAAACATTCTACACGGATCTCTC | 1632 |
| Db | 1561 | AATGAATTAACGGAAAATGACAAGAACGCTCAAAACATTCTACACGGATCTCTC | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACACTATTGTGTA | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACACTATTGTGTA | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATTGAAATTCTAGAGATGAA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATTGAAATTCTAGAGATGAA | 1740 |
| Qy | 1753 | GCCCATGATATTGCTGGTAAAGATTGGCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCATGATATTGCTGGTAAAGATTGGCTCCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGTTCGAGGTTTGCTGTTGGCTTGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCCTATGGTTCGAGGTTTGCTGTTGGCTTGAA | 1860 |
| Qy | 1873 | AAATATTAACAGATGACAAACTTTCTCAGTATTAAATTCTAGCTAGTACAGGCTCTAA | 1932 |
| Db | 1861 | AAATATTAACAGATGACAAACTTTCTCAGTATTAAATTCTAGCTAGTACAGGCTCTAA | 1920 |
| Qy | 1933 | TATGAACATAATTGGATAACTTGCTTGAGATTTTACTGAGAAGACATTGACTAAT | 1992 |
| Db | 1921 | TATGAACATAATTGGATAACTTGCTTGAGATTTTACTGAGAAGACATTGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTCTTGGCATTTAAATCTGAGATGCCAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGGCACTTTCTTGGCATTTAAATCTGAGATGCCAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCTGCTTGGAGCTTATTGTCGTGCATGGGGATGTATTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTGGCTGCTTGGAGCTTATTGTCGTGCATGGGGATGTATTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAGTCAGGGAATGGAAAAGCTCATTAACCTAACGACATTCTCAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAGTCAGGGAATGGAAAAGCTCATTAACCTAACGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGGAGAGGATGAAACACAAAAGGTACAGATGAAGTTTACTGAGGAAATGAGG | 2232 |
| Db | 2161 | CAGGGAGAGGATGAAACACAAAAGGTACAGATGAAGTTTACTGAGGAAATGAGG | 2220 |
| Qy | 2233 | CGACCAAGATTTCATGGATGCCCTACAGGGCTTGCTGTCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAAGATTTCATGGATGCCCTACAGGGCTTGCTGTCTCTAAACCCCTGTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAGGCCACTGTG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAGGCCACTGTG | 2340 |
| Qy | 2353 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCTAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCTAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATGCTATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATGCTATTATG | 2460 |
| Qy | 2473 | GAAAATATCGCAAAATCAAGGCTTGATCTCGAATTTACCTTATGGTTCTGTC | 2532 |
| Db | 2461 | GAAAATATCGCAAAATCAAGGCTTGATCTCGAATTTACCTTATGGTTCTGTC | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTTGGACTTATTGAGGTGGCGAAATTCTCACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTTGGACTTATTGAGGTGGCGAAATTCTCACACTATTATGCAAATT | 2580 |
| Qy | 2593 | CAGTCGAAAGGGGGCTTAAAGAGTGCACCTGAGTTCAACAGGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTCGAAAGGGGGCTTAAAGAGTGCACCTGAGTTCAACAGGCCACACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAAGACAAGAACAAAGGAGAAAATATGATGCGAGCATTGACCTGTATTACAGTTCA | 2712 |
| Db | 2641 | CTCAAAAGACAAGAACAAAGGAGAAAATATGATGCGAGCATTGACCTGTATTACAGTTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGTACCTTCATTGGGAATTGGAGATCGTCACAAAGTAAC | 2772 |

| | | | |
|----|------|---|------|
| Db | 2701 | TGTGCTGGATACGTGTAGGACCTTCATTGGAAATTGGAGATCCTCACAAATAGAAC | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGGACAACTGGTTCAATATAGATTGGACACTTGTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGGACAACTGGTTCAATATAGATTGGACACTTGTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAAAATTGGTTAAACGAGAACGGTGCCTTGTGGACACAGGATTTC | 2892 |
| Db | 2821 | AAGAAGAAAAAAATTGGTTAAACGAGAACGGTGCCTTGTGGACACAGGATTTC | 2880 |
| Qy | 2893 | TTAATAGTGTAGTAAAGGAGGCCAAGAATGCAAAGACAAGAGAATTGGAGGGTTT | 2952 |
| Db | 2881 | TTAATAGTGTAGTAAAGGAGGCCAAGAATGCAAAGACAAGAGAATTGGAGGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTACTAGCTATTGACAGCATGCCAATCTCTCATAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTACTAGCTATTGACAGCATGCCAATCTCTCATAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTGGCTTGGAACTACAACTTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTGGCTTGGAACTACAACTTTGATGACATTGCA | 3060 |
| Qy | 3073 | TACATTGCGAAAGACCCTAGGCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTGCGAAAGACCCTAGGCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCACATCATGGTGGCTGGACACAAAATGGATTGGATCTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCACATCATGGTGGCTGGACACAAAATGGATTGGATCTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGCATTGAACTGAAAGATACTGAGAAAATGAAAGCTCAGCTGG | 3252 |
| Db | 3181 | ACAATTAAACAGCATGCATTGAACTGAAAGATACTGAGAAAATGAAAGCTCAGCTGG | 3240 |
| Qy | 3253 | TTCCACACTGCACTGTTAAACTCTCAGCAGGCCAAGACCGGTTGCATAGGAATTGCA | 3312 |
| Db | 3241 | CACTACACTGCACTGTTAAACTCTCAGCAGGCCAAGACCGGTTGCATAGGAATTGCA | 3300 |
| Qy | 3313 | AATCCATGAAACAGCATTAGATTACGCAAGAACAGAAATAAAACTATATAATTAAA | 3372 |
| Db | 3301 | AATCCATGAAACAGCATTAGATTACGCAAGAACAGAAATAAAACTATATAATTAAA | 3360 |
| Qy | 3373 | TAATGTAACGCAACAGGGTTTGTAGCATTAAACTAGTTCAATTCAAA | 3424 |
| Db | 3361 | TAATGTAACGCAACAGGGTTTGTAGCATTAAACTAGTTCAATTCAAA | 3412 |

RESULT 5
US-11-443-428A-73308
; Sequence 73308, Application US/11443428A
; Patent No. 7745391
; GENERAL INFORMATION:
; APPLICANT: Mintz, Liat
; APPLICANT: Xie, Hanging
; APPLICANT: Dahari, Dvir
; APPLICANT: Levanon, Erez
; APPLICANT: Freilich, Shiri
; APPLICANT: Beck, Nili
; APPLICANT: Zhu, Wei-Yong
; APPLICANT: Wasserman, Alon
; APPLICANT: Hermesh, Chen
; APPLICANT: Azar, Idit
; APPLICANT: Bernstein, Jeanne
TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES
FILE REFERENCE: 02/23929
CURRENT APPLICATION NUMBER: US/11/443,428A
CURRENT FILING DATE: 2006-05-31
NUMBER OF SEQ ID NOS: 1034312
SOFTWARE: PatentIn version 3.1
SEQ ID NO 73308
LENGTH: 4300
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: (15)..(15)
OTHER INFORMATION: n is a, c, g, or t
FEATURE:
NAME/KEY: misc_feature

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FEATURE:
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OTHER INFORMATION: n is a, c, g, or t
FEATURE:
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;NAME/KEY: misc_feature
;LOCATION: (354)..(354)
OTHER INFORMATION: n is a, c, g, or t
US-11-443-428A-73308
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|-----------------------|-------|---|---------|------------|-----|--------|-------|
| Query Match | 97.6% | Score | 3343.4; | DB | 11; | Length | 4300; |
| Best Local Similarity | 98.9% | | | | | | |
| Matches | 3387; | Conservative | 0; | Mismatches | 37; | Indels | 2; |
| Gaps | | | | | | | 2; |
| Qy | 1 | AGGATCAGAACAACTGCCCAAGACCATCATCAGGTGAACTGTGGGGCATCCACTTGATG | | | | | 60 |
| Db | 172 | AGAACATCAGAACAACTGCCCAAGACCATCATCAGGTGAACTGTGGGGCATCCACTTGATG | | | | | 231 |
| Qy | 61 | CCCCCAAGAACATTCTAGTGGAACTGGTTACTACCAAATGGAATGATAGTGAACCTTAAATGC | | | | | 120 |
| Db | 232 | CCCCCAAGAACATTCTAGTGGAACTGGTTACTACCAAATGGAATGATAGTGAACCTTAAATGC | | | | | 291 |
| Qy | 121 | CTCCGTGAGGCTACATTAAGTAACTATAAGCATGAACATTAAAGAACAGAAAGAACAAATAC | | | | | 180 |
| Db | 292 | CTCCGTGAGGCTACATTAAGTAACTATAAGCATGAACATTAAAGAACAGAAAGAACAAATAC | | | | | 351 |
| Qy | 181 | CCTCTCATCAACTCTTCAGATGAATCTTCTACATTTCGTAAGTGTACCCAAAGAA | | | | | 240 |
| Db | 352 | CCTCTCATCAACTCTTCAGATGAATCTTCTACATTTCGTAAGTGTACCCAAAGAA | | | | | 411 |
| Qy | 241 | GCAGAAAAGGGAAAGAATTGGATGAAACAAGACGACTTGTGATCTCGGCTTTCAA | | | | | 300 |
| Db | 412 | GCAGAAAAGGGAAAGAATTGGATGAAACAAGACGACTTGTGACCTTCGGCTTTCAA | | | | | 471 |
| Qy | 301 | CCATTAAAAAGTAAATTGAACCACTAGGCAACCCTGAAAGAAAAGATCCTAACATCGAGAA | | | | | 360 |
| Db | 472 | CCATTAAAAAGTAAATTGAACCACTAGGCAACCCTGAAAGAAAAGATCCTAACATCGAGAA | | | | | 531 |
| Qy | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTTAAAGATCCTGAAGTA | | | | | 420 |
| Db | 532 | ATTGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTTAAAGATCCTGAAGTA | | | | | 591 |
| Qy | 421 | CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGGAAGCTGTGGATCTAGGATCTT | | | | | 480 |
| Db | 592 | CAGGACTTCCGAAGAAATTCTTAATGTTGTAAGGAAGCTGTGGATCTAGGACCTC | | | | | 651 |
| Qy | 481 | AATTCACCTCATAGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACCAAGAG | | | | | 540 |
| Db | 652 | AATTCACCTCATAGTAGAGCAATGTATGTCATCCCAAATGTAGAATCTCACCAAGAG | | | | | 711 |
| Qy | 541 | CTGCCAAAGCACATATAATAAAATTGGATAGAGCCAAATAATAGTGGTATTTGGTA | | | | | 600 |
| Db | 712 | CTGCCAAAGCACATATAATAAAATTGGATAGAGCCAAATAATAGTGGTATCTGGTA | | | | | 771 |
| Qy | 601 | ATAGTTCTCCAAATAATGACAAGCAGAAAGTACTCTGAAATCAACCATGACTGTG | | | | | 660 |
| Db | 772 | ATAGTTCTCCAAATAATGACAAGCAGAAAGTACTCTGAAATCAACCATGACTGTG | | | | | 831 |
| Qy | 661 | CCAGAACAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAACGATATGGTATCATCT | | | | | 720 |

| | | | |
|----|------|--|------|
| Db | 832 | CCAGAACAAAGTAACTGGCTGAAGCAATCAGGAAAAAAACTCGAAGTTGCTATCCTCT | 891 |
| Qy | 721 | GAACAACTAAACCTGTGTTTAGAATATCAGGCAAGTACATTAAAAGTGTGGA | 780 |
| Db | 892 | GAACAACTAAACCTGTGTTTAGAATATCAGGCAAGTATATTAAAAGTGTGGA | 951 |
| Qy | 781 | TGTGATGAATACTTCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGACGTG | 840 |
| Db | 952 | TGTGATGAATACTTCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGACGTG | 1011 |
| Qy | 841 | ATAATGCTGGGAGGATGCCAATTGAGAGTGTGGCTAAAGAAAGCCTTATTCTCAA | 900 |
| Db | 1012 | ATAATGCTGGGAGGATGCCAATTGTGTTGATGGCTAAAGAAAGCCTTATTCTCAA | 1071 |
| Qy | 901 | CTGCCAATGGACTGTGTTTACAATGCCATCTTATCCAGCAGCATTTCCACAGCTACACCA | 960 |
| Db | 1072 | CTGCCAATGGACTGTGTTTACAATGCCATCTTATCCAGCAGCATTTCCACAGCTACACCA | 1131 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTTATAATAGACACTCAGAATA | 1020 |
| Db | 1132 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTTATAATAGTCACACTCAGAATA | 1191 |
| Qy | 1021 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTTGT | 1080 |
| Db | 1192 | AAAATTCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGATAAGATCTATGT | 1251 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGACACTCAAAGAGTA | 1140 |
| Db | 1252 | CGAACAGGTATCTACCATGGAGGAGAACCTTATGTGACAATGTGACACTCAAAGAGTA | 1311 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACTCTGATCTT | 1200 |
| Db | 1312 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATACTCTGATCTT | 1371 |
| Qy | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTTAAGGCCGAAAGGTGCTAAA | 1260 |
| Db | 1372 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTTAAGGCCGAAAGGTGCTAAA | 1431 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGTTGATTACACAGACACTCTA | 1320 |
| Db | 1432 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGTTGATTACACAGACACTCTA | 1491 |
| Qy | 1321 | GTATCTGAAAATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGGCTG | 1380 |
| Db | 1492 | GTATCTGAAAATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGGCTG | 1551 |
| Qy | 1381 | AACCTTATGGGTGTTACTGATCAATCCAAATAAGAAACTCTCATGCTTAGAGTTGGAG | 1440 |
| Db | 1552 | AACCTTATGGGTGTTACTGATCAATCCAAATAAGAAACTCTCATGCTTAGAGTTGGAG | 1611 |
| Qy | 1441 | TTTGACTGTTTCAGCACTGTGTTAAAGTCCCATGATATGTCAGTGTGAAAGCATGCC | 1500 |
| Db | 1612 | TTTGACTGTTTCAGCACTGTGTTAAAGTCCCATGATATGTCAGTGTGAAAGCATGCC | 1671 |
| Qy | 1501 | AATTGGCTGTATCCCGAGAACAGGATTGCTATTCCACCGCAGACTGAGTAACAGA | 1560 |
| Db | 1672 | AATTGGCTGTATCCCGAGAACAGGATTGCTATTCCACCGCAGACTGAGTAACAGA | 1731 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAATGACAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1732 | CTAGCTAGAGACAATGAATTAAGGGAAATGACAAGAACAGCTCAAAGCAATTCTACA | 1791 |
| Qy | 1621 | CGAGATCTCTCTGAAATCACTGAGCAGGAGAACGATTCTATGGAGTCACAGACAC | 1680 |
| Db | 1792 | CGAGATCTCTCTGAAATCACTGAGCAGGAGAACGATTCTATGGAGTCACAGACAC | 1851 |
| Qy | 1681 | TATTGTGAACTATCCCGAAATTCTACCCAAATTGCTCTGCTGTTAAATGGAAATTCT | 1740 |
| Db | 1852 | TATTGTGAACTATCCCGAAATTCTACCCAAATTGCTCTGCTGTTAAATGGAAATTCT | 1911 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGATTGCTGGTAAAGGATTTGGCTCCAATCAACCTGAA | 1800 |
| Db | 1912 | AGAGATGAAGTAGCCCAGATGATTGCTGGTAAAGGATTTGGCTCCAATCAACCTGAA | 1971 |
| Qy | 1801 | CAGGCTATGGAACTCTGGACTGTAATTACCCAGATCTATGGTTGAGGTTTGTGTT | 1860 |
| Db | 1972 | CAGGCTATGGAACTCTGGACTGTAATTACCCAGATCTATGGTTGAGGTTTGTGTT | 2031 |
| Qy | 1861 | CGGTCTTGGAAAAATTAAACAGATGACAAACTTCTCAGTATTAACTCAGCTAGTA | 1920 |
| Db | 2032 | CGGTCTTGGAAAAATTAAACAGATGACAAACTTCTCAGTATTAACTCAGCTAGTA | 2091 |

| | | | |
|----|------|--|------|
| Qy | 1921 | CAGGTCTAAATATGAAACAATTGGATAACTTGCCTGTGAGATTTACTGAAGAAA | 1980 |
| Db | 2092 | CAGGTCTAAATATGAAACAATTGGATAACTTGCCTGTGAGATTTACTGAAGAAA | 2151 |
| Qy | 1981 | GCATTGACTAATCAAGGATTGGCACTTTCTTTGCATTTAAACATGAGATGCAAC | 2040 |
| Db | 2152 | GCATTGACTAATCAAGGATTGGCACTTTCTTTGCATTTAAACATGAGATGCAAC | 2211 |
| Qy | 2041 | AATAAACAGTTAGCCAGGGTTGGCTGCTTGGAGTCCTATTGTCATGGG | 2100 |
| Db | 2212 | AATAAACAGTTAGCCAGGGTTGGCTGCTTGGAGTCCTATTGTCATGGG | 2271 |
| Qy | 2101 | ATGTATTGAAGCACCTGAATAGGCAGTCAGGCAATGGAAAGCTCATTAACCT | 2160 |
| Db | 2272 | ATGTATTGAAGCACCTGAATAGGCAGTCAGGCAATGGAAAGCTCATTAACCT | 2331 |
| Qy | 2161 | GACATCTCAAACAGGAGGAAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2332 | GACATCTCAAACAGGAGGAAAGGATGAAACACAAAAGGTACAGATGAAGTTTAGTT | 2391 |
| Qy | 2221 | GAGCAAATGAGCGACCAAGATTCATGGATGCCCTACAGGGCTTGCTGTCCTAAC | 2280 |
| Db | 2392 | GAGCAAATGAGCGACCAAGATTCATGGATGCTACAGGGCTTGCTCCTAAC | 2451 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGAAATTGTCCTGAAAA | 2340 |
| Db | 2452 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGAAATTGTCCTGAAAA | 2511 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCA | 2400 |
| Db | 2512 | AGGCCACTGTGGTTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCA | 2571 |
| Qy | 2401 | AATGAGATCATCTTAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2460 |
| Db | 2572 | AATGAGATCATCTTAAATGGGATGATTACGGCAAGATATGCTAACACTCAAATT | 2631 |
| Qy | 2461 | ATTGCTATTATGAAAATCTGCAAATCAAGGTCTTGTCTGAAATTGTTACCTTAT | 2520 |
| Db | 2632 | ATTGCTATTATGAAAATCTGCAAATCAAGGTCTTGTCTGAAATTGTTACCTTAT | 2691 |
| Qy | 2521 | GGTTGCTGTCAATCGGTACTGTGGACTTATTGAGGTGGTGGAAATTCTCACACT | 2580 |
| Db | 2692 | GGTTGCTGTCAATCGGTACTGTGGACTTATTGAGGTGGTGGAAATTCTCACACT | 2751 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGCCGCTTGAAGGGTGCACTCAGGTTCAACAGCC | 2640 |
| Db | 2752 | ATTATGCAAATTCACTGCAAAGCCGCTTGAAGGGTGCACTCAGGTTCAACAGCC | 2811 |
| Qy | 2641 | CTACATCAGTGCTAAAGACAAGAACAAAGGAGAAATTATGATGCACCCATTGAC | 2700 |
| Db | 2812 | CTACATCAGTGCTAAAGACAAGAACAAAGGAGAAATTATGATGCACCCATTGAC | 2871 |
| Qy | 2701 | TTTACACGTTCATGTCGGATACTGTGAGCTACCTTCATTGGAAATTGGAGATCGT | 2760 |
| Db | 2872 | TTTACACGTTCATGTCGGATACTGTGAGCTACCTTCATTGGAAATTGGAGATCGT | 2931 |
| Qy | 2761 | CACAACTAACATCATGGTAAAGACGATGGCAACTCTTCATATAGATTGGACAC | 2820 |
| Db | 2932 | CACAACTAACATCATGGTAAAGACGATGGCAACTCTTCATATAGATTGGACAC | 2991 |
| Qy | 2821 | TTTTGGATCAAGAGAAAAAAATTGGTTATAACAGGAACGGTGTGCCATTGTTG | 2880 |
| Db | 2992 | TTTTGGATCAAGAGAAAAAAATTGGTTATAACAGGAACGGTGTGCCATTGTTG | 3051 |
| Qy | 2881 | ACACAGGATTCTTAATAGTGTAGTAGTAAAGGGGCCAAGATGCACAAAGACA | 2940 |
| Db | 3052 | ACACAGGATTCTTAATAGTGTAGTAGTAAAGGGGCCAAGATGCACAAAGACA | 3111 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAGGTTATCTAGCTATTGCAAGCATGCC | 3000 |
| Db | 3112 | TTTGAGAGGTTTCAGGAGATGTGTTACAGGTTATCTAGCTATTGCAAGCATGCC | 3171 |
| Qy | 3001 | CTCTTCTAAATCTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACTACA | 3060 |
| Db | 3172 | CTCTTCTAAATCTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACTACA | 3231 |
| Qy | 3061 | GATGACATGGCATACATTGAAAGACCTAGGCCATTAGATAAAACTGAGCAAGGG | 3120 |
| Db | 3232 | GATGACATGGCATACATTGAAAGACCTAGGCCATTAGATAAAACTGAGCAAGGG | 3291 |

| | | | |
|----|------|---|------|
| Qy | 3121 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGCTGGACACAAAAATGGAT | 3180 |
| Db | 3292 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGCTGGACACAAAAATGGAT | 3351 |
| Qy | 3181 | TGGATCTCCACACAAATTAAACAGCATTGAACTG -AAAGATAACTGAGAAAATGAA | 3239 |
| Db | 3352 | TGGATCTCCACACAAATTAAACAGCATTGAACTGAGAAAATGAA | 3411 |
| Qy | 3240 | AGCTCACTCTGGATTCCACACTGCACATTAAACTCTCAGCAGGCCAACAGCGATTGC | 3299 |
| Db | 3412 | AGCTCACTCTGGATTCCACACTGCACATTAAACTCTCAGCAGGCCAACAGCGATTGC | 3471 |
| Qy | 3300 | ATAGGAATTGACAACTTACAGCATTAG -ATTACAGCAAGAACAGAAATAAAATA | 3358 |
| Db | 3472 | ATAGGAATTGACAACTTACAGCATTAGAATTACAGCAAGAACAGAAATAAAATA | 3531 |
| Qy | 3359 | CTATATAATTAAATAATGTAACGCAACAGGGTTGTAGCACTTAAACTAGTTTCATT | 3418 |
| Db | 3532 | CTATATAATTAAATAATGTAACGCAACAGGGTTGTAGCACTTAAACTAGTTTCATT | 3591 |
| Qy | 3419 | TCAAAA 3424 | |
| Db | 3592 | TCAAAA 3597 | |

RESULT 6

US-11-443-428A-73313

; Sequence 73313, Application US/11443428A

; Patent No. 7745391

GENERAL INFORMATION:

; APPLICANT: Mintz, Liat
; APPLICANT: Xie, Hanqing
; APPLICANT: Dahari, Dvir
; APPLICANT: Levanon, Erez
; APPLICANT: Freilich, Shiri
; APPLICANT: Beck, Nili
; APPLICANT: Zhu, Wei-Yong
; APPLICANT: Wasserman, Alon
; APPLICANT: Hermesh, Chen
; APPLICANT: Azar, Idit
; APPLICANT: Bernstein, Jeanne

; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES

; FILE REFERENCE: 02/23929

; CURRENT APPLICATION NUMBER: US/11/443,428A

; CURRENT FILING DATE: 2006-05-31

; NUMBER OF SEQ ID NOS: 1034312

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 73313

; LENGTH: 4354

; TYPE: DNA

; ORGANISM: Homo sapiens

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (15)..(15)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (23)..(23)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (27)..(27)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (30)..(30)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (59)..(59)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (64)..(64)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc_feature

; LOCATION: (86)..(86)

; OTHER INFORMATION: n is a, c, g, or t

; FEATURE:

; NAME/KEY: misc feature

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; LOCATION: (90)..(90)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (354)..(354)
; OTHER INFORMATION: n is a, c, g, or t
US-11-443-428A-73313
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| Query Match | 97.6% | Score | 3343.4 | DB | 11 | Length | 4354 | | |
|-----------------------|-------|--|--------|------------|----|--------|------|------|---|
| Best Local Similarity | 98.9% | | | | | | | | |
| Matches | 3387 | Conservative | 0 | Mismatches | 37 | Indels | 2 | Gaps | 2 |
| Qy | 1 | AGGATCAGAACAACTCCCAAGACCATCATCAGGTGAACCTGGGGCATCCACTTGATG | 60 | | | | | | |
| Db | 172 | AGAACATCAGAACAACTCCCAAGACCATCATCAGGTGAACCTGGGGCATCCACTTGATG | 231 | | | | | | |
| Qy | 61 | CCCCCAAGAACATCCTAGTGGAAATGTTACTACCAAATGGAAATGATAGTGAATTAGAATGC | 120 | | | | | | |
| Db | 232 | CCCCCAAGAACATCCTAGTGGAAATGTTACTACCAAATGGAAATGATAGTGAATTAGAATGC | 291 | | | | | | |
| Qy | 121 | CTCCGTGAGGCATCACATTAGTAACATAAAGCATGAACATTAAAGAACAGAAAATAC | 180 | | | | | | |
| Db | 292 | CTCCGTGAGGCATCACATTAAACCATAAAGCATGAACATTAAAGAACAGAAAATAC | 351 | | | | | | |
| Qy | 181 | CCTCTCCATCAACTCTTCAGATGAATCTTACATTTCGTAAGTGTACCCAAGAA | 240 | | | | | | |
| Db | 352 | CCNCTCCATCAACTCTTCAGATGAATCTTACATTTCGTAAGTGTACCCAAGAA | 411 | | | | | | |
| Qy | 241 | GCAGAAAGGGAGAAATTGGATGAAACAAGACGACTTGTGATCTCGGCTTTCAA | 300 | | | | | | |
| Db | 412 | GCAGAAAGGGAGAAATTGGATGAAACAAGACGACTTGTGACCTTCGGCTTTCAA | 471 | | | | | | |
| Qy | 301 | CCATTTTAAAGTAATGAAACCTAGGCCAACCGTGAAGAAAAGATCTCAATCGAGAA | 360 | | | | | | |
| Db | 472 | CCCTTTAAAGTAATGAAACCTAGGCCAACCGTGAAGAAAAGATCTCAATCGAGAA | 531 | | | | | | |
| Qy | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCAATTGATGGTTAAAGATCTGAAGTA | 420 | | | | | | |
| Db | 532 | ATTGGTTTGCTATCGGCATGCCAGTGTGCAATTGATGGTTAAAGATCCAGAGTA | 591 | | | | | | |
| Qy | 421 | CAGGACTTCCAGAACAAATTCTTAATGTTGAAGAACGCTGTGGATCTAGGATCTT | 480 | | | | | | |
| Db | 592 | CAGGACTTCCAGAACAAATTCTGAACCGCTTGTAAAGAACGCTGTGGATCTAGGACCTC | 651 | | | | | | |
| Qy | 481 | AATTCACTTCACTAGTAGAGCAATGTATGTCATCGGCCACATGTGAATCTCACAGAG | 540 | | | | | | |
| Db | 652 | AATTCACTTCACTAGTAGAGCAATGTATGTCATCTCCAATGTGAATCTCACAGAGA | 711 | | | | | | |
| Qy | 541 | CTGCCAAAGCACATATAAATAAAATTGGATAGGCCAATAATAGTGGTGTGGTA | 600 | | | | | | |
| Db | 712 | TTGCCAAAGCACATATAAATAAAATTGGATAGGCCAATAATAGTGGTGTGGTA | 771 | | | | | | |
| Qy | 601 | ATAGTTCTCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCATGACTGTG | 660 | | | | | | |
| Db | 772 | ATAGTTCTCAAATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCATGACTGTG | 831 | | | | | | |
| Qy | 661 | CCAGAACAAAGTAATGCTGAAGCAATCAGGAAAAAAACTAGAACGTTGCTATCATCT | 720 | | | | | | |
| Db | 832 | CCAGAACAAAGTAATGCTGAAGCAATCAGGAAAAAAACTCGAACGTTGCTATCATCT | 891 | | | | | | |
| Qy | 721 | GAACAAATTAAAACCTCTGTTTCTAGAATATCAGGCCAAGTACATTAAAGTGTGTGGA | 780 | | | | | | |
| Db | 892 | GAACAACTAAAACCTCTGTTTCTAGAATATCAGGCCAAGTATATTAAAAGTGTGTGGA | 951 | | | | | | |
| Qy | 781 | TGTGATGAAATCTCTAGAAAAATATCCTCTGACTCAGTATAAGTATAAGAACCTGT | 840 | | | | | | |
| Db | 952 | TGTGATGAAATCTCTAGAAAAATATCCTCTGACTCAGTATAAGTATAAGAACCTGT | 1011 | | | | | | |
| Qy | 841 | ATAATGCTTGGGAGGATGCCAATTGAGAGATGATGGCTAAAGAACGCTTATTCTCAA | 900 | | | | | | |
| Db | 1012 | ATAATGCTTGGGAGGATGCCAATTGATGGCTGAGTGGCTAAAGAACGCTTATTCTCAA | 1071 | | | | | | |
| Qy | 901 | CTGCCAATGGACTGTTTACATGCCATCTTATCCAGACGCTTCCACAGCTACACCA | 960 | | | | | | |
| Db | 1072 | CTGCCAATGGACTGTTTACATGCCATCTTATCCAGACGCTTCCACAGCTACACCA | 1131 | | | | | | |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCCTGGGTTATAATAGAGCACTCAGAATA | 1020 | | | | | | |
| Db | 1132 | TATATGAATGGAGAACATCTACAAAATCCCCTGGGTTATAATAGTGCACTCAGAATA | 1191 | | | | | | |
| Qy | 1021 | AAAATTCTTGTCGAACCTACGTGAATCTAAATTCGAGACATTGACAAGATTGTGTT | 1080 | | | | | | |

| | | | |
|----|------|---|------|
| Db | 1192 | TTTGCGACCTACGTGAAATTCGAGACATTGATAAGATCTATGTT | 1251 |
| Qy | 1081 | CGAACAGGTATCTACCATGAGGAGAACCTTATGTCAGAACCTAAAGAGTA | 1140 |
| Db | 1252 | CGAACAGGTATCTACCATGAGGAGAACCTTATGTCAGAACCTAAAGAGTA | 1311 |
| Qy | 1141 | CCTTGTCCAATCCCAAGGTGGAATGAATGGCTGAATTATGATATATACATCCTGATCTT | 1200 |
| Db | 1312 | CCTTGTCCAATCCCAAGGTGGAATGAATGGCTGAATTATGATATATACATCCTGATCTT | 1371 |
| Qy | 1201 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTTAAGGCCAAGGGTGTAAA | 1260 |
| Db | 1372 | CCTCGTGTGTCGACTTGCCTTCCATTGCTCTGTTAAGGCCAAGGGTGTAAA | 1431 |
| Qy | 1261 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGTTGATTACACAGACTCTA | 1320 |
| Db | 1432 | GAGGAACACTGTCCATTGGCATGGGAAATATAAACTTGTGTTGATTACACAGACTCTA | 1491 |
| Qy | 1321 | GTATCTGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1492 | GTATCTGAAAAATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTG | 1551 |
| Qy | 1381 | AACCCATTGGTGTACTGGATCAAATCCAATAAAGAACTCATGCTTAGAGTTGGAG | 1440 |
| Db | 1552 | AACCCATTGGTGTACTGGATCAAATCCAATAAAGAACTCATGCTTAGAGTTGGAG | 1611 |
| Qy | 1441 | TTTACTGTTTGTGAGTCAGTGTGTTAAAGTCCAGATATGTCAGTATTGAAGAGCATGCC | 1500 |
| Db | 1612 | TTTACTGTTTGTGAGTCAGTGTGTTAAAGTCCAGATATGTCAGTATTGAAGAGCATGCC | 1671 |
| Qy | 1501 | AATTGGCTGTATCCCGAGAACGAGGATTAGCTATTCCCAAGCAGACTGAGTAACAGA | 1560 |
| Db | 1672 | AATTGGCTGTATCCCGAGAACGAGGATTAGCTATTCCCAAGCAGACTGAGTAACAGA | 1731 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGAAATGACAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1732 | CTAGCTAGAGACAATGAATTAAGGAAATGACAAGAACAGCTCAAAGCAATTCTACA | 1791 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1680 |
| Db | 1792 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCTATGGAGTCACAGACAC | 1851 |
| Qy | 1681 | TATTGTTGTAACTATCCCGAAATTCTACCCAATTGCTCTGCTGTTAAATGGAATTCT | 1740 |
| Db | 1852 | TATTGTTGTAACTATCCCGAAATTCTACCCAATTGCTCTGCTGTTAAATGGAATTCT | 1911 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATGGCTCCTAACACTGAA | 1800 |
| Db | 1912 | AGAGATGAAGTAGCCCAGATGTATTGCTTGGTAAAGATGGCTCCTAACACTGAA | 1971 |
| Qy | 1801 | CAGGTATGGAACTTCTGGACTGTAATTACCCAGATCTATGGTTGAGGTTTGTGTT | 1860 |
| Db | 1972 | CAGGTATGGAACTTCTGGACTGTAATTACCCAGATCTATGGTTGAGGTTTGTGTT | 2031 |
| Qy | 1861 | CGGGCTTGGAAAAATTAAACAGATGACAAACTTCTCAGTATTAACTCAGCTAGTA | 1920 |
| Db | 2032 | CGGGCTTGGAAAAATTAAACAGATGACAAACTTCTCAGTATTAACTCAGCTAGTA | 2091 |
| Qy | 1921 | CAGGTCTAAATATGAAACAATTGGATAACTTGTGCTGAGATTTTACTGAAAGAAA | 1980 |
| Db | 2092 | CAGGTCTAAATATGAAACAATTGGATAACTTGTGCTGAGATTTTACTGAAAGAAA | 2151 |
| Qy | 1981 | GCATTGACTAATCAAGGATTGGCACTTTCTTTGCGATTAAAACTGAGATGCAAC | 2040 |
| Db | 2152 | GCATTGACTAATCAAGGATTGGCACTTTCTTTGCGATTAAAACTGAGATGCAAC | 2211 |
| Qy | 2041 | AATAAAACAGTTAGGCCAGAGGTTGGCTGCTTGGACTCTATTGTCGTGATGTTG | 2100 |
| Db | 2212 | AATAAAACAGTTAGGCCAGAGGTTGGCTGCTTGGACTCTATTGTCGTGATGTTG | 2271 |
| Qy | 2101 | ATGTATTGAGCACCTGAATAGGCAGTCAGGCAATTGAAAGCTATTAACTTAAC | 2160 |
| Db | 2272 | ATGTATTGAGCACCTGAATAGGCAGTCAGGCAATTGAAAGCTATTAACTTAAC | 2331 |
| Qy | 2161 | GACATTCTCAACAGGAGGAAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |
| Db | 2332 | GACATTCTCAACAGGAGGAAAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2391 |
| Qy | 2221 | GAGCAAATGAGGCCACGAGATTCTAGGATGCCCTACAGGGCTTGCTCTCTAAAC | 2280 |

| | | | |
|----|------|--|------|
| Db | 2392 | GAGCAATGAGGGCACCAGATTCTATGGATGCTCTACAGGGCTTCCTGCTCTCTAAAC | 2451 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGCGAATTATGCTCTGCAA | 2340 |
| Db | 2452 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAAGAGTGTGCGAATTATGCTCTGCAA | 2511 |
| Qy | 2341 | AGGCCACTGTGGTTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2400 |
| Db | 2512 | AGGCCACTGTGGTTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCAGAAC | 2571 |
| Qy | 2401 | AATGAGATCATCTTTAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2460 |
| Db | 2572 | AATGAGATCATCTTTAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATT | 2631 |
| Qy | 2461 | ATTCTGATTATGAAAAATCTGCAAATCAGGTCTTGATCTTCAAGTACCTTACCTTAT | 2520 |
| Db | 2632 | ATTCTGATTATGAAAAATCTGCAAATCAGGTCTTGATCTTCAAGTACCTTACCTTAT | 2691 |
| Qy | 2521 | GGTTGCTGCAATCGGTGACTGTGTTGGACTTATTGAGGTGGCGAAATTCTCACACT | 2580 |
| Db | 2692 | GGTTGCTGCAATCGGTGACTGTGTTGGACTTATTGAGGTGGCGAAATTCTCACACT | 2751 |
| Qy | 2581 | ATTATGCAAATTCACTGCAAAGGCGCTTGAAGGGTGCAGTCACTGCAGTTAACAGCCAC | 2640 |
| Db | 2752 | ATTATGCAAATTCACTGCAAAGGCGCTTGAAGGGTGCAGTCACTGCAGTTAACAGCCAC | 2811 |
| Qy | 2641 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2700 |
| Db | 2812 | CTACATCAGTGGCTAAAGACAAGAACAAAGGAGAAATATGATGCAGCCATTGACCTG | 2871 |
| Qy | 2701 | TTTACACGTTCATGTGCTGATACTGTGTTAGCTACCTTCATTGAGGATTTGGAGATCGT | 2760 |
| Db | 2872 | TTTACACGTTCATGTGCTGATACTGTGTTAGCTACCTTCATTGAGGATTTGGAGATCGT | 2931 |
| Qy | 2761 | CACATAGTAACATCATGGTAAAGACGATGGACAACCTGTTCATATAGATTGGACAC | 2820 |
| Db | 2932 | CACATAGTAACATCATGGTAAAGACGATGGACAACCTGTTCATATAGATTGGACAC | 2991 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTCGCAATTGTTTG | 2880 |
| Db | 2992 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACGAGAACGTCGCAATTGTTTG | 3051 |
| Qy | 2881 | ACACAGGATTTCTAAATAGTGTGTTAAAGGAGGCCAAGAATGCACAAAGACAAGAGAA | 2940 |
| Db | 3052 | ACACAGGATTTCTAAATAGTGTGTTAAAGGAGGCCAAGAATGCACAAAGACAAGAGAA | 3111 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGCAAGGATGCCAAT | 3000 |
| Db | 3112 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGCAAGGATGCCAAT | 3171 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATT | 3060 |
| Db | 3172 | CTCTTCATAAAATCTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACTACAATT | 3231 |
| Qy | 3061 | GATGACATTGACATACATTGAAAGACCTAGGCCATTAGATAAAACTGAGCAAGAGGTTG | 3120 |
| Db | 3232 | GATGACATTGACATACATTGAAAGACCTAGGCCATTAGATAAAACTGAGCAAGAGGTTG | 3291 |
| Qy | 3121 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGCTGGACAAACAAAAATGGAT | 3180 |
| Db | 3292 | GAGTATTTCATGAAACAAATGAATGATGCACATCATGGCTGGACAAACAAAAATGGAT | 3351 |
| Qy | 3181 | TGGATCTTCACACAAATTAAACAGCATGTCATTGAACTG-AAGATAACTGAGAAAATGAA | 3239 |
| Db | 3352 | TGGATCTTCACACAAATTAAACAGCATGTCATTGAACTGAGAAAATGAACTGAGAAAATGAA | 3411 |
| Qy | 3240 | AGCTCACTCTGGATTCCACACTGCACTGTTAAACTCTCAGCAGGCCAAAGACCGATTGC | 3299 |
| Db | 3412 | AGCTCACTCTGGATTCCACACTGCACTGTTAAACTCTCAGCAGGCCAAAGACCGATTGC | 3471 |
| Qy | 3300 | ATAGGAATTGACAACTCATGAACAGCATTAG-ATTACAGCAAGAACAGAAATAATAA | 3358 |
| Db | 3472 | ATAGGAATTGACAACTCATGAACAGCATTAGAATTACAGCAAGAACAGAAATAATAA | 3531 |
| Qy | 3359 | CTATATAATTAAATAATGAAACGCAACAGGGTTGATAGCAGCTTAAACTAGTTCA | 3418 |
| Db | 3532 | CTATATAATTAAATAATGAAACGCAACAGGGTTGATAGCAGCTTAAACTAGTTCA | 3591 |
| Qy | 3419 | TCAAA 3424 | |
| Db | 3592 | TCAAA 3597 | |

RESULT 7
US-08-162-081B-34
; Sequence 34, Application US/08162081B
; Patent No. 5824492
GENERAL INFORMATION:
; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
TITLE OF INVENTION: THEIR PREPARATION AND USE
NUMBER OF SEQUENCES: 50
CORRESPONDENCE ADDRESS:
; ADDRESSEE: Felife & Lynch
; STREET: 805 Third Avenue
; CITY: New York
; STATE: New York
; COUNTRY: USA
; ZIP: 10022
COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/162,081B
; FILING DATE: February 7, 1994
; CLASSIFICATION: 435
PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993
ATTORNEY/AGENT INFORMATION:
; NAME: Pasqualini, Patricia A.
; REGISTRATION NUMBER: 34,894
; REFERENCE/DOCKET NUMBER: LUD 5256
TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 688-9200
; TELEFAX: (212) 838-3884
INFORMATION FOR SEQ ID NO: 34:
SEQUENCE CHARACTERISTICS:
; LENGTH: 3240 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-08-162-081B-34
Query Match 94.5%; Score 3236.8; DB 2; Length 3240;
Best Local Similarity 99.9%;
Matches 3238; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

| | | |
|----|---|-----|
| Qy | 13 ATGCCCTCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTATGCCCTAAAGAAC | 72 |
| Db | 1 ATGCCCTCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTATGCCCTAAAGAAC | 60 |
| Qy | 73 CTAGTGGATGTTACTACCAATGGAATGATAGTGACTTTAGAATGCCCTCGTGAGGCT | 132 |
| Db | 61 CTAGTGGATGTTACTACCAATGGAATGATAGTGACTTTAGAATGCCCTCGTGAGGCT | 120 |
| Qy | 133 ACATTAAGTAACCTAAAGCATGAACATTAAAGGAAGAAAATACCCCTCCATCAA | 192 |
| Db | 121 ACATTAAGTAACCTAAAGCATGAACATTAAAGGAAGAAAATACCCCTCCATCAA | 180 |
| Qy | 193 CTTCTCAAGATGAATCTCTTACATTTCGAAGTGTTACCCAAGAACAGAACAGGAA | 252 |
| Db | 181 CTTCTCAAGATGAATCTCTTACATTTCGAAGTGTTACCCAAGAACAGAACAGGAA | 240 |
| Qy | 253 GAATTTTTGATGAAACAGACGACTTTGTATCTCGCTTTCAACCATTAAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAGACGACTTTGTATCTCGCTTTCAACCATTAAAAA | 300 |
| Qy | 313 GTAATTGAAACCGTAGGCAACCGTGAAAGAAAAGATCCTAACATCGAGAAATTGGTTTGCT | 372 |
| Db | 301 GTAATTGAAACCGTAGGCAACCGTGAAAGAAAAGATCCTAACATCGAGAAATTGGTTTGCT | 360 |
| Qy | 373 ATCGGCATGCCAGTGTGCGAATTGATATGGTTAAAGATCCTGAAGTACAGGACTTCCGA | 432 |
| Db | 361 ATCGGCATGCCAGTGTGCGAATTGATATGGTTAAAGATCCTGAAGTACAGGACTTCCGA | 420 |
| Qy | 433 AGAAATATTCTTAATGTTGTAAGAAGCTGTTGATCTTAGGGATCTTAATCACCTCAT | 492 |

| | | | |
|----|------|--|------|
| Db | 421 | AGAAATATTCTTAATGTTGAAAGAAGCTGGATCTTAGGGATCTTAAATTCACTCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACCAAGCTGCCAAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACCAAGCTGCCAAAGCAC | 540 |
| Qy | 553 | ATATATAATAAATTGGATAGAGGCCAATAATAGTGGTAGTTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAATAAATTGGATAGAGGCCAATAATAGTGGTAGTTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAAGTATACTCTGAAAATCAACCAGTACTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAAGCAGAAGTATACTCTGAAAATCAACCAGTACTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTCTGAAGGAACTCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAAATAAAA | 732 |
| Db | 661 | ATTCTGAAGGAACTCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAAATAAAA | 720 |
| Qy | 733 | CTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAGTGTGTTGATGTAATAC | 792 |
| Db | 721 | CTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAGTGTGTTGATGTAATAC | 780 |
| Qy | 793 | TTCTAGAAAAAATTCCTCTGAGTCAGTATAAGTATAAGAAGCTGTATAATGCTGGG | 852 |
| Db | 781 | TTCTAGAAAAAATTCCTCTGAGTCAGTATAAGTATAAGAAGCTGTATAATGCTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGGAAGATGATGCCAACGCTTATTCCTCAACTGCCATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGGAAGATGATGCCAACGCTTATTCCTCAACTGCCATGGAC | 900 |
| Qy | 913 | TGTTTACCATGCCATCTTACCGACGCTTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACCATGCCATCTTACCGACGCTTCCACAGCTACACCATATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGGTATAATAGACCACTCAGAATAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGGTATAATAGACCACTCAGAATAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATTCTGAGACATTGACAAGATTATGTTGACACAGGTATC | 1092 |
| Db | 1021 | GCAACCTATGTGAATGTAATATTCTGAGACATTGACAAGATTATGTTGACACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTCACATGTGACACTCAAAGAGTACCTTGTCCAAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTCACATGTGACACTCAAAGAGTACCTTGTCCAAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGATGCCATTGTCACATGTGACACTCAAAGAGTACCTTGTCCGTCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGATGCCATTGTCACATGTGACACTCAAAGAGTACCTTGTCCGTCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTGTTAAAGGCCAAAGGGTCTAAAGAGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTGTTAAAGGCCAAAGGGTCTAAAGAGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGCACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGCACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATAAAAGAACACTCCATGCTTAGAGTTGGAGTTGACTGGTT | 1452 |
| Db | 1381 | GTTACTGGATCAAATAAAAGAACACTCCATGCTTAGAGTTGGAGTTGACTGGTT | 1440 |
| Qy | 1453 | ACGAGCTGGTAAAGTCCAGATATGTCAGTGATGAAAGACATGCCAAATTGGTCTGA | 1512 |
| Db | 1441 | ACGAGCTGGTAAAGTCCAGATATGTCAGTGATGAAAGACATGCCAAATTGGTCTGA | 1500 |
| Qy | 1513 | TCCCCGAGAACGAGGATTAGCTATTCACCCACCCAGGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCCGAGAACGAGGATTAGCTATTCACCCACCCAGGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAAGGGAAAATGACAAGAACAGCTCAACAGAACCTAAAGCAATTCTC | 1632 |
| Db | 1561 | AATGAATTAAAGGGAAAATGACAAGAACAGCTCAACAGAACCTAAAGCAATTCTC | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTAACT | 1692 |

| | | | |
|----|------|---|------|
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAACGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTTCTGTTAATGGAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTTCTGTTAATGGAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCAGATGTATTGCTTGGTAAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGGTCAGGTTTGTCTGGTCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCCTATGGGTCAGGTTTGTCTGGTCTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAACACTTCTCAGTATTAAATTCTAGCTAGTACAGGCTCTAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAACACTTCTCAGTATTAAATTCTAGCTAGTACAGGCTCTAAA | 1920 |
| Qy | 1933 | TATGAAACATAATTGGATAACTTGCTTGTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1992 |
| Db | 1921 | TATGAAACATAATTGGATAACTTGCTTGTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTTCTTGGCATTAAAATCTGAGATGCACAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGGCACTTTTCTTGGCATTAAAATCTGAGATGCACAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTTGGCCTGCTTTGGAGTCTATTGCTGATGTGGGATGTATTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTTGGCCTGCTTTGGAGTCTATTGCTGATGTGGGATGTATTGAAG | 2100 |
| Qy | 2113 | CACCTGAATTAGGCAAGTCAGGGCAATGAAAAAGCTCATTTAACTTAAC TGACATTCCTCAA | 2172 |
| Db | 2101 | CACCTGAATTAGGCAAGTCAGGGCAATGAAAAAGCTCATTTAACTTAAC TGACATTCCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGTAAACACAAAGGTACAGATGAAGTTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGTAAACACAAAGGTACAGATGAAGTTTTAGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAGATTTCATGGATGCCCTACAGGGCTTGTGTCCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAGATTTCATGGATGCCCTACAGGGCTTGTGTCCTCTAAACCCCTGTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGGAACCCAGACATCATGTCAGAGTTACTGTGAGAACAAATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGGAACCCAGACATCATGTCAGAGTTACTGTGAGAACAAATGAGATCATC | 2400 |
| Qy | 2413 | TTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2472 |
| Db | 2401 | TTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2460 |
| Qy | 2473 | GAAAATCTGGCAAATCAAGGTCTGATCTTCAAGTATTACCTTATGGGTCGTCA | 2532 |
| Db | 2461 | GAAAATCTGGCAAATCAAGGTCTGATCTTCAAGTATTACCTTATGGGTCGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGAGGACTATTGAGGGTGTGCGAACATTCTCACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGAGGACTATTGAGGGTGTGCGAACATTCTCACACTATTATGCAAATT | 2580 |
| Qy | 2593 | CAGTCCAAAGGGGCTTGAAGAGTCGACTGCAAGTTCAACAGGCCACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTCCAAAGGGGCTTGAAGAGTCGACTGCAAGTTCAACAGGCCACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAGACAAGAACAAAGGAGAACATATGATGCGGCCATTGACCTGTTACACGTTCA | 2712 |
| Db | 2641 | CTCAAGACAAGAACAAAGGAGAACATATGATGCGGCCATTGACCTGTTACACGTTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGTACCTTCAATTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACTGTGAGTACCTTCAATTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTGAAGAGCAGTGTGACAACCTGTTCATATAGATTGAGACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTGAAGAGCAGTGTGACAACCTGTTCATATAGATTGAGACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAAATTGGTTATAACGGAGAACGGTGTGCCATTGTTTGACACAGGATTIC | 2892 |
| Db | 2821 | AAGAAGAAAAAATTGGTTATAACGGAGAACGTGTGCCATTGTTTGACACAGGATTIC | 2880 |

| | | | |
|----|------|--|------|
| Qy | 2893 | TTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAATTGAGAGGTTT | 2952 |
| Db | 2881 | TTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAATTGAGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTACAAGGCTTATCTAGCTTCGACAGCATGCCAATCTCTTCATAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTACAAGGCTTATCTAGCTTCGACAGCATGCCAATCTCTTCATAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTGGCTCGGAATGCCAGAACATCAAATCTTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTGGCTCGGAATGCCAGAACATCAAATCTTTGATGACATTGCA | 3060 |
| Qy | 3073 | TACATTGCAAAGACCCTAGCCTAGATAAAAAGCTGAGCAAGAGGCTTGAGGATTTATG | 3132 |
| Db | 3061 | TACATTGCAAAGACCCTAGCCTAGATAAAAAGCTGAGCAAGAGGCTTGAGGATTTATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCACATCATGGGCTCGAACACAAAAATGGATTGGATCTTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCACATCATGGGCTCGAACACAAAAATGGATTGGATCTTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGATTGAACTGAGAAAATGAAAGCTCACTCTGGA | 3252 |
| Db | 3181 | ACAATTAAACAGCATGATTGAACTGAGAAAATGAAAGCTCACTCTGGA | 3240 |

RESULT 8

US-08-780-872-34

; Sequence 34, Application US/08780872

; Patent No. 5846824

; GENERAL INFORMATION:

; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
; TITLE OF INVENTION: THEIR PREPARATION AND USE
; NUMBER OF SEQUENCES: 50

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Felfe & Lynch
; STREET: 805 Third Avenue
; CITY: New York
; STATE: New York
; COUNTRY: USA
; ZIP: 10022

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/780,872
; FILING DATE: 09-JAN-1997
; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993

; ATTORNEY/AGENT INFORMATION:

; NAME: Pasqualini, Patricia A.
; REGISTRATION NUMBER: 34,894
; REFERENCE/DOCKET NUMBER: LUD 5256

; TELECOMMUNICATION INFORMATION:

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; TELEFAX: (212) 838-3884

; INFORMATION FOR SEQ ID NO: 34:

; SEQUENCE CHARACTERISTICS:
; LENGTH: 3240 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-08-780-872-34

Query Match 94.5%; Score 3236.8; DB 2; Length 3240;
Best Local Similarity 99.9%;
Matches 3238; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

| | | | |
|----|----|---|----|
| Qy | 13 | ATGCCCTCCAAGACCATCATCAGGTGAACCTGTGGGCATCCACTTGTGCCCCAAAGAAC | 72 |
|----|----|---|----|

| | | | |
|----|---|---|----|
| Db | 1 | ATGCCCTCCAAGACCATCATCAGGTGAACCTGTGGGCATCCACTTGTGCCCCAAAGAAC | 60 |
|----|---|---|----|

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|----|------|---|------|
| Qy | 73 | CTAGTGGAAATGTTACTACCAATGGAATGATAGTGACTTTAGAATGCCCTCGTGAGGCT | 132 |
| Db | 61 | CTAGTGGAAATGTTACTACCAATGGAATGATAGTGACTTTAGAATGCCCTCGTGAGGCT | 120 |
| Qy | 133 | ACATTAGTAACATAAACGATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 192 |
| Db | 121 | ACATTAGTAACATAAACGATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 180 |
| Qy | 193 | CTTCTTCAGATGAATCTTCTACATTTCGTAAGTGTACCCAAGAAGCAGAAAAGGAA | 252 |
| Db | 181 | CTTCTTCAGATGAATCTTCTACATTTCGTAAGTGTACCCAAGAAGCAGAAAAGGAA | 240 |
| Qy | 253 | GAATTTTTGATGAAACAAGACGACTTTGTATCTCGGTTTTCAACCATTAAAAA | 312 |
| Db | 241 | GAATTTTTGATGAAACAAGACGACTTTGTATCTCGGTTTTCAACCATTAAAAA | 300 |
| Qy | 313 | GTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCTAACATCGAGAAAATGGTTTGCT | 372 |
| Db | 301 | GTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCTAACATCGAGAAAATGGTTTGCT | 360 |
| Qy | 373 | ATCGGCATGCCAGTGTGCGAATTGATATGGTTAAAGATCCTGAAGTACAGGACTTCCGA | 432 |
| Db | 361 | ATCGGCATGCCAGTGTGCGAATTGATATGGTTAAAGATCCTGAAGTACAGGACTTCCGA | 420 |
| Qy | 433 | AGAAAATATTCTTAATGTTGAAAGAACGCTGGGATCTTAGGGATCTTAATTCACCTCAT | 492 |
| Db | 421 | AGAAAATATTCTTAATGTTGAAAGAACGCTGGGATCTTAGGGATCTTAATTCACCTCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACCGAGCTGCCAAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACCGAGCTGCCAAAGCAC | 540 |
| Qy | 553 | ATATATAAATTGGATAGAGGCCAATAATAGTGTTAGTTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAAATTGGATAGAGGCCAATAATAGTGTTAGTTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAACTATCTGAAAATCAACCATGACTGTGCCCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAAGCAGAACTATCTGAAAATCAACCATGACTGTGCCCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTCATCATCTGAACAATTAAA | 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTCATCATCTGAACAATTAAA | 720 |
| Qy | 733 | CTCTGTGTTAGAATATCAGGGCAAGTACATTAAAAGTGTGTTGATGAAATAC | 792 |
| Db | 721 | CTCTGTGTTAGAATATCAGGGCAAGTACATTAAAAGTGTGTTGATGAAATAC | 780 |
| Qy | 793 | TTCTTAGAAAAAATCTCTGAGTCAGTATAAGTATAAGAACGTATAATGCTGG | 852 |
| Db | 781 | TTCTTAGAAAAAATCTCTGAGTCAGTATAAGTATAAGAACGTATAATGCTGG | 840 |
| Qy | 853 | AGGATGCCAATTGAGATGATGGCTAAAGAACCTTATTCTCACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAGATGATGGCTAAAGAACCTTATTCTCACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATCTTATCCAGACGCCATTCCACAGCTACACCATATAATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATCTTATCCAGACGCCATTCCACAGCTACACCATATAATGAATGGA | 960 |
| Qy | 973 | GAAACATCACAAAATCCCTGGGTTAAATAGAGCACTCAGAATAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCACAAAATCCCTGGGTTAAATAGAGCACTCAGAATAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTCGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTATGTAATGTAATATTGAGACATTGACAAGATTATGTCGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTGACAACTGTGACACTCAAAGAGTACCTTGTCCAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTGACAACTGTGACACTCAAAGAGTACCTTGTCCAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGGCTGAATTATGATATACATTCTGATCTTCCCTGCTGCTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGGCTGAATTATGATATACATTCTGATCTTCCCTGCTGCTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCATTGCTGTAAAGGCCGAAAGGGTGCTAAAGGAAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCATTGCTGTAAAGGCCGAAAGGGTGCTAAAGGAAACACTGT | 1260 |

| | | | |
|----|------|---|------|
| Qy | 1273 | CCATTGGCATGGGAAATAAACTTGTGATTACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAACTTGTGATTACAGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGCCCTGAATCTTGGCCAGTACCTCATGATTAGCAGAGATTCTGACCCATTGGT | 1392 |
| Db | 1321 | ATGCCCTGAATCTTGGCCAGTACCTCATGATTAGCAGAGATTCTGACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAAGAACCTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAAGAACCTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCACTGTGTAAGATTCCCAGATATGTCAGTGATTGAAGACCATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCACTGTGTAAGATTCCCAGATATGTCAGTGATTGAAGACCATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCGAGAACGAGGATTAGCTATCCACCGAGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCGAGAACGAGGATTAGCTATCCACCGAGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAGGAAATAAGACAAGAACAGCTCAAAGCAATTCTACAGGAGATCCTCTC | 1632 |
| Db | 1561 | AATGAATTAAGGAAATAAGACAAGAACAGCTCAAAGCAATTCTACAGGAGATCCTCTC | 1620 |
| Qy | 1633 | TCTGAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTAAC | 1692 |
| Db | 1621 | TCTGAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTTAATGGAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTTAATGGAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCAAGATGATTGCTGGTAAAGATTGGCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCCCAAGATGATTGCTGGTAAAGATTGGCTCCAATCAAACCTGAACAGGCTATGGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTTGGCTTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCCTATGGTCGAGGTTTGCTGTTGGCTTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAACATTCTCAGTATTTAACCTAGTACAGGCTCTAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAACATTCTCAGTATTTAACCTAGTACAGGCTCTAAA | 1920 |
| Qy | 1933 | TATGAACATAATTGGATAACTTGCCTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1992 |
| Db | 1921 | TATGAACATAATTGGATAACTTGCCTGAGATTTTACTGAAGAAAGCATTGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGCACTTTCTTGGCATTTAAATCTGAGATGCCAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGCACTTTCTTGGCATTTAAATCTGAGATGCCAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCCTGCTTGGAGCTTGTGCTGATGTGGGATGTATTGAAG | 2112 |
| Db | 2041 | AGCCAGAGGTTGGCCTGCTTGGAGCTTGTGCTGATGTGGGATGTATTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGCGAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACATCTCAA | 2172 |
| Db | 2101 | CACCTGAATAGCGAAGTCGAGGCAATGGAAAAGCTCATTAACCTAACATCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATAACAAAGCTACAGGATGAGATTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGATAACAAAGCTACAGGATGAGATTAGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAAGATTCTATGGATGCCCTACAGGGCTGCTCTCTAAACCTGCTCATCAA | 2292 |
| Db | 2221 | CGACCAAGATTCTATGGATGCCCTACAGGGCTGCTCTCTAAACCTGCTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGACAAAGGCCACTGTG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGACAAAGGCCACTGTG | 2340 |
| Qy | 2353 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCTGAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTCTGAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTAGCGAAGATACTGCTAACACTCTAAATTCTGTTATATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTAGCGAAGATACTGCTAACACTCTAAATTCTGTTATATG | 2460 |
| Qy | 2473 | GAAAATCTGCAAAATCAAGGTCTGATCTGCAATGTTACCTTATGGGTCTGTCA | 2532 |

| | | | |
|----|------|--|------|
| Db | 2461 | GAAAATATCTGGCAAATCAAGGCTTGTACCTTCGAATCTTACCTTATGGTTCTGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAAATCTCACACTATATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAAATCTCACACTATATGCAAATT | 2580 |
| Qy | 2593 | CAGTGCAGAAGCCGGCTTGAAGGTGCACTGCAGTTCACAGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGCAGAAGCCGGCTTGAAGGTGCACTGCAGTTCACAGCCACACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCATTGACCTGTTACACGTTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCATTGACCTGTTACACGTTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGCTACCTTCACTTGGAAATTGGAGATCGTCACAACTAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACTGTGAGCTACCTTCACTTGGAAATTGGAGATCGTCACAACTAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTTGGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTTGGACACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAAAATTGGTTATAACGAGAACCTGTGCTTGGACACAGGATTC | 2892 |
| Db | 2821 | AAGAAGAAAAAAATTGGTTATAACGAGAACCTGTGCTTGGACACAGGATTC | 2880 |
| Qy | 2893 | TTAATAGTAGTTAGTAAGGAGCCAAAGAACATGCCAAAGACAAGAGAATTGAGAGGTT | 2952 |
| Db | 2881 | TTAATAGTAGTTAGTAAGGAGCCAAAGAACATGCCAAAGACAAGAGAATTGAGAGGTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGTATTGACACGGATGCCAATCTCTTCATAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGTATTGACACGGATGCCAATCTCTTCATAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACATACAATCTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTGGCTCTGGAAATGCCAGAACATACAATCTTGATGACATTGCA | 3060 |
| Qy | 3073 | TACATTGCAAAGCCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTGCAAAGCCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACGATGCACTGAACACTGAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3252 |
| Db | 3181 | ACAATTAAACGATGCACTGAACACTGAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3240 |

RESULT 9

US-09-085-957-34

; Sequence 34, Application US/09085957

; Patent No. 6274327

; GENERAL INFORMATION:

; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
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; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,

; APPLICANT: Stefano; Gout, Ivan Tarasovitch

; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,

; TITLE OF INVENTION: THEIR PREPARATION AND USE

; NUMBER OF SEQUENCES: 50

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Feife & Lynch
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; ZIP: 10022; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage

; COMPUTER: IBM PS/2

; OPERATING SYSTEM: PC-DOS

; SOFTWARE: Wordperfect

; CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/09/085,957

; FILING DATE:

; CLASSIFICATION:

; PRIOR APPLICATION DATA:

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;
; APPLICATION NUMBER: 08/780,872
; FILING DATE: 09-JAN-1997
; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/CB93/00761
; FILING DATE: 13 April 1993
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INFORMATION FOR SEQ ID NO: 34:
SEQUENCE CHARACTERISTICS:
; LENGTH: 3240 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-085-957-34
```

Query Match 94.5%; Score 3236.8; DB 3; Length 3240;
 Best Local Similarity 99.9%;
 Matches 3238; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

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| Qy | 13 ATGCCTCCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTATGCCCAAGAAC | 72 |
| Db | 1 ATGCCTCCAAGACCATCATCAGGTGAACTGTGGGCATCCACTTGTATGCCCAAGAAC | 60 |
| Qy | 73 CTAGTGGAAATGTTACTACCAAATGGAATGAGATGACTTTAGAATGCCCTCGTGAGG | 132 |
| Db | 61 CTAGTGGAAATGTTACTACCAAATGGAATGAGATGACTTTAGAATGCCCTCGTGAGG | 120 |
| Qy | 133 ACATTAGTAACCTATAAACCATGAACTATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 192 |
| Db | 121 ACATTAGTAACCTATAAACCATGAACTATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 180 |
| Qy | 193 CTTCTTCAGATGAACTTCTTACATTTCGTAAGTGTACCCAGAACAGCAGAAAGGGAA | 252 |
| Db | 181 CTTCTTCAGATGAACTTCTTACATTTCGTAAGTGTACCCAGAACAGCAGAAAGGGAA | 240 |
| Qy | 253 GAATTTTTGATGAAACAGACGACTTTGTATCTCGCTTTCAACCATTAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAGACGACTTTGTATCTCGCTTTCAACCATTAAAA | 300 |
| Qy | 313 GTAATTGAAACAGTAGGCACCGTGAAGAAAAGATCCTAACATCGAGAAATTGGTTTGCT | 372 |
| Db | 301 GTAATTGAAACAGTAGGCACCGTGAAGAAAAGATCCTAACATCGAGAAATTGGTTTGCT | 360 |
| Qy | 373 ATCGGCATGCCAGTGTGGAATTGATATGGTAAAGATCTGTAAGTACAGGACTTCGA | 432 |
| Db | 361 ATCGGCATGCCAGTGTGGAATTGATATGGTAAAGATCTGTAAGTACAGGACTTCGA | 420 |
| Qy | 433 AGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTTAGGGATCTAACCTCAT | 492 |
| Db | 421 AGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTAGGGATCTAACCTCAT | 480 |
| Qy | 493 AGTAGAGCAATGTATGCTATCCGCACATGTAGAATCTCACAGAGCTGCCAAAGCAC | 552 |
| Db | 481 AGTAGAGCAATGTATGCTATCCGCACATGTAGAATCTCACAGAGCTGCCAAAGCAC | 540 |
| Qy | 553 ATATATAATAAATTGGATAGAGGCCAATAATAGTGTGATTTGGTAATAGTTCTCCA | 612 |
| Db | 541 ATATATAATAAATTGGATAGAGGCCAATAATAGTGTGATTTGGTAATAGTTCTCCA | 600 |
| Qy | 613 AATAATGACAAGCAGAAGTATACCTGAAAATCAACCATGACTGTGTGCCAGAACAGTA | 672 |
| Db | 601 AATAATGACAAGCAGAAGTATACCTGAAAATCAACCATGACTGTGTGCCAGAACAGTA | 660 |
| Qy | 673 ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATTAAA | 732 |
| Db | 661 ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATTAAA | 720 |
| Qy | 733 CTCTGTGTTTAGAATATCAGGCAAGTACATTAAAAGTGTGTGGATGTGAATAC | 792 |
| Db | 721 CTCTGTGTTTAGAATATCAGGCAAGTACATTAAAAGTGTGTGGATGTGAATAC | 780 |
| Qy | 793 TTCCCTAGAAAAAATACCTCTGAGTCAGTATAAGTATATAAGGCTGTATAATGCTTGGG | 852 |
| Db | 781 TTCCCTAGAAAAAATACCTCTGAGTCAGTATAAGTATATAAGGCTGTATAATGCTTGGG | 840 |

| | | | |
|----|------|--|------|
| Qy | 853 | AGGATGCCAATTGAAGATGATGGCTAAAGAACCTTATTCTCAACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAAGATGATGGCTAAAGAACCTTATTCTCAACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATCTTATCCAGACGCATTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATCTTATCCAGACGCATTCCACAGCTACACCATATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCCTGGGTTATAATAGAGCAGTCACTCAGAATAAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCCTGGGTTATAATAGAGCAGTCACTCAGAATAAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACAGTGAATCTAAATATTGAGACATTGACAAGATTATGTTCGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTATGTGAATGTAATATTGAGACATTGACAAGATTATGTTCGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTGACAATGTGAACTCTAAAGAGTACCTTGTCCAAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTGACAATGTGAACTCTAAAGAGTACCTTGTCCAAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGAAATGGCTGAATTATGATATACATTCTGTATCTCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGAAATGGCTGAATTATGATATACATTCTGTATCTCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCATTCGCTGTAAAGGCCAAAGGGTGTCAAAGAGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCATTCGCTGTAAAGGCCAAAGGGTGTCAAAGAGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAACTTGTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAACTTGTGATTACACAGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAAAGAACCTCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAAAGAACCTCATGCTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGGTAAAGTCCCAGATATGTCACTGAGATTGAAAGACATGCCAATTGGTCTGTA | 1512 |
| Db | 1441 | AGCAGTGGTAAAGTCCCAGATATGTCACTGAGATTGAAAGACATGCCAATTGGTCTGTA | 1500 |
| Qy | 1513 | TCCCGAGAACGAGGATTAGCTATCCACGCCAGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCGAGAACGAGGATTAGCTATCCACGCCAGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAAGGAAATGACAAAGAACAGCTCAAAAGCAATTCTACACGGATCTCTC | 1632 |
| Db | 1561 | AATGAATTAAAGGAAATGACAAAGAACAGCTCAAAAGCAATTCTACACGGATCTCTC | 1620 |
| Qy | 1633 | TCTGAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1692 |
| Db | 1621 | TCTGAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGTGTTAATGGAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGTGTTAATGGAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCGAGATGATTGCTGGAAAGATTGCTTCATGGAGTCACAGACACTATTGTGTAAC | 1812 |
| Db | 1741 | GCCCGAGATGATTGCTGGAAAGATTGCTTCATGGAGTCACAGACACTATTGTGTAAC | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCTATGGITCGAGGTITGCTGTTGGCTTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCTATGGITCGAGGTITGCTGTTGGCTTGGAA | 1860 |
| Qy | 1873 | AAATTTAACAGATGACAAACTTCTCAGTATTAACTCAGTAACTCAGCTACTACAGGTCTAAA | 1932 |
| Db | 1861 | AAATTTAACAGATGACAAACTTCTCAGTATTAACTCAGTAACTCAGCTACTACAGGTCTAAA | 1920 |
| Qy | 1933 | TATGAACAATATTGATAACTTGTGAGATTTTACTGAAGAAAGCATTGACTAAAT | 1992 |
| Db | 1921 | TATGAACAATATTGATAACTTGTGAGATTTTACTGAAGAAAGCATTGACTAAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGCACTTTCTTGGCATTAAATCTGAGATGCCAAATAAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGCACTTTCTTGGCATTAAATCTGAGATGCCAAATAAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCCTGTTGGAGTCCTATTGCTGTCATGGGGATGTTGAAG | 2112 |

| | | | |
|----|------|---|------|
| Db | 2041 | AGCCAGAGGTTGGCTGCTTGGAGTCCTATTGTCGTGCATGTGGATGTTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTTAACTGACACCTCTCAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTAACCTTAACTGACACCTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGATGAAACACAAAAGGTACAGATGAAGTTTTAGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAGAGTTATCATGGATGCCCTACAGGGCTTGTGTCCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAGAGTTATCATGGATGCCCTACAGGGCTTGTGTCCTCTAAACCCCTGTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGANTGGAGAACCAGACATCATGTCAGAGTTACTGTTTCAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGANTGGAGAACCAGACATCATGTCAGAGTTACTGTTTCAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2460 |
| Qy | 2473 | GAAAATATCTGCCAATCAACAGTCCTGATCTTCGAATGTTACCTTATGGTTCTGTC | 2532 |
| Db | 2461 | GAAAATATCTGCCAATCAACAGTCCTGATCTTCGAATGTTACCTTATGGTTCTGTC | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCACACTATATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATTGAGGTGGTGCAGAAATTCACACTATATGCAAATT | 2580 |
| Qy | 2593 | CAGTGCAGAGCGGCTTGAAGAGTCGACTGCAAGTCAACAGGCCACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGCAGAGCGGCTTGAAGAGTCGACTGCAAGTCAACAGGCCACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTGTTACACGTTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAAAGGAGAAATATATGATGCAGCCATTGACCTGTTACACGTTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGTAGCTACCTTCATTTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACTGTGTAGCTACCTTCATTTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGCAACTGTTCATATAGATTTGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGCAACTGTTCATATAGATTTGACACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAAATTGGTTATAACGAGAACCTGTGCCCCATTGTTGACACAGGATTTC | 2892 |
| Db | 2821 | AAGAAGAAAAAATTGGTTATAACGAGAACCTGTGCCCCATTGTTGACACAGGATTTC | 2880 |
| Qy | 2893 | TTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGGAAATTGAGAGGTTT | 2952 |
| Db | 2881 | TTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGGAAATTGAGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTCATAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAATCTCTCATAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACATCAACATCTTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACATCAACATCTTTGATGACATTGCA | 3060 |
| Qy | 3073 | TACATTGCAAGACCCATGCTTAGATAAAACTGAGCAAGGGCTTGGAGATTTCTG | 3132 |
| Db | 3061 | TACATTGCAAGACCCATGCTTAGATAAAACTGAGCAAGGGCTTGGAGATTTCTG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATGGATCTTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATGGATCTTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3252 |
| Db | 3181 | ACAATTAAACAGCATGCATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3240 |

RESULT 10

US-09-325-095-34
; Sequence 34, Application US/09325095
; Patent No. 7422849
; GENERAL INFORMATION:
; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
; TITLE OF INVENTION: THEIR PREPARATION AND USE
; NUMBER OF SEQUENCES: 50
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; CITY: New York
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; COUNTRY: USA
; ZIP: 10022
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/325,095
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/085,957
; FILING DATE:
; APPLICATION NUMBER: 08/780,872
; FILING DATE: 09-JAN-1997
; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993
; ATTORNEY/AGENT INFORMATION:
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; INFORMATION FOR SEQ ID NO: 34:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3240 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-09-325-095-34

| | | | |
|-----------------------|----------------------|---------------|--------------|
| Query Match | 94.5%; Score 3236.8; | DB 8; | Length 3240; |
| Best Local Similarity | 99.9%; | | |
| Matches 3238; | Conservative 0; | Mismatches 2; | Indels 0; |
| Gaps 0; | | | |

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Qy      13 ATGCCCTCCAAGACCATCATCAGGTGAACACTGTGGGGCATCCACTTGTGATGCCCTCAAGAACATC 72
Db      1 ATGCCCTCCAAGACCATCATCAGGTGAACACTGTGGGGCATCCACTTGTGATGCCCTCAAGAACATC 60
Qy      73 CTAGTGGAAATGTTTACTACCAAATGGAAATGATAGTGACTTTAGAATGCCCTCCGTGAGGGCT 132
Db      61 CTAGTGGAAATGTTTACTACCAAATGGAAATGATAGTGACTTTAGAATGCCCTCCGTGAGGGCT 120
Qy      133 ACATTAGTAACCTAAAGCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA 192
Db      121 ACATTAGTAACCTAAAGCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA 180
Qy      193 CTTCTTCAAGATGAACTTCTTACATTTCGTAAGTGTACCCAGAACAGCAGAAAAGGGAA 252
Db      181 CTTCTTCAAGATGAACTTCTTACATTTCGTAAGTGTACCCAGAACAGCAGAAAAGGGAA 240
Qy      253 GAATTTTTGATGAAACAAGACGACTTTGTGATCTCGGCTTTCAACCATTTAAAAA 312
Db      241 GAATTTTTGATGAAACAAGACGACTTTGTGATCTCGGCTTTCAACCATTTAAAAA 300
Qy      313 GTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCTCAATCGAGAAAATGGTTTGCT 372
Db      301 GTAATTGAAACAGTAGGCAACCGTGAAGAAAAGATCTCAATCGAGAAAATGGTTTGCT 360
Qy      373 ATCGGGCATGCCAGTGTGGAAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA 432

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| | | | |
|----|------|--|------|
| Db | 361 | ATCGGCATGCCAGTGTGCAATTGATGGTAAAGATCCTGAAGTACAGGACTTCGA | 420 |
| Qy | 433 | AGAAAATATTCTTAATGTTGTAAAGAACGCTGTGGATCTTAGGGATCTTAATTCACTCAT | 492 |
| Db | 421 | AGAAAATATTCTTAATGTTGTAAAGAACGCTGTGGATCTTAGGGATCTTAATTCACTCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACCAAGAGCTGCCAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACCAAGAGCTGCCAAGCAC | 540 |
| Qy | 553 | ATATATAAATTGGATAGAGGCCAAATAATAGTGGTGAATTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAAATTGGATAGAGGCCAAATAATAGTGGTGAATTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAACTATCTGAAAATCAACCAGTACTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAAGCAGAACTATCTGAAAATCAACCAGTACTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATTAAAA | 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATTAAAA | 720 |
| Qy | 733 | CTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAGTGTGGATGTGATGAATAC | 792 |
| Db | 721 | CTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAGTGTGGATGTGATGAATAC | 780 |
| Qy | 793 | TTCCTAGAAAAATATCCTGTAGTCAGTATAAGTATATAAGAGCTGTATAATGCTTGGG | 852 |
| Db | 781 | TTCCTAGAAAAATATCCTGTAGTCAGTATAAGTATATAAGAGCTGTATAATGCTTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGAAGATGATGCCAAAGAACCTTATTCTCACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGAAGATGATGCCAAAGAACCTTATTCTCACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAAATGCCATTTATCCAGACGCCATTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACAAATGCCATTTATCCAGACGCCATTCCACAGCTACACCATATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGTTATAATAGAGCAGTCTAGAAATAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGTTATAATAGAGCAGTCTAGAAATAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACAGTGAATCTAAATATTGAGACATTGACAAGATTATGTTGAAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTATGTGAATGTAATATTGAGACATTGACAAGATTATGTTGAAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGACTACCTTGTCCAAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGACTACCTTGTCCAAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGAACTGGCTGAATTATGATATACATTCCTGATCTCCCTGTGT | 1212 |
| Db | 1141 | CCCAGGTGGAATGAACTGGCTGAATTATGATATACATTCCTGATCTCCCTGTGT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTGTAAAGGCCGAAGGGTGTCAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTGTAAAGGCCGAAGGGTGTCAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCTTATGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCTTATGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAGAACCTCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAGAACCTCATGCTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAAGACATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGTGGTAAAGTCCCAGATATGTCAGTGATTGAAAGACATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCGAGAAGCAGGATTAGCTATCCACGCCAGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCGAGAAGCAGGATTAGCTATCCACGCCAGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAGGAAAATGACAAAGAACGCTCAAGCAATTCTACACGAGATCTCTC | 1632 |
| Db | 1561 | AATGAATTAAGGAAAATGACAAAGAACGCTCAAGCAATTCTACACGAGATCTCTC | 1620 |

| | | | |
|----|------|--|------|
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAGATTTCATGGAGTCACAGACACTATTGTGTAAC | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAGATTTCATGGAGTCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAATTCTACCCAAATTGCTTGTGTTAATGAAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAATTCTACCCAAATTGCTTGTGTTAATGAAATTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCGAGATGATTGTTGGTAAAGATTGCCCTCAATCAAACCTGAACAGGCTATGAA | 1812 |
| Db | 1741 | GCCCGAGATGATTGTTGGTAAAGATTGCCCTCAATCAAACCTGAACAGGCTATGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCTATGGTTCGAGGTTTGTCTGGCTTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGTAATTACCCAGATCTATGGTTCGAGGTTTGTCTGGCTTGGAA | 1860 |
| Qy | 1873 | AAATAATTAAACAGATGACAAACTTCTCAGTATTAAATTCACTGAGATCAAGGTCTAAA | 1932 |
| Db | 1861 | AAATAATTAAACAGATGACAAACTTCTCAGTATTAAATTCACTGAGATCAAGGTCTAAA | 1920 |
| Qy | 1933 | TATGAACAAATTGGATAACTGCTTGAGATTTTACTGAAGAAAGCATGACTAAT | 1992 |
| Db | 1921 | TATGAACAAATTGGATAACTGCTTGAGATTTTACTGAAGAAAGCATGACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGCACTTTTCTTGGCATTAAATCTGAGATGCACAAATAAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATTGGCACTTTTCTTGGCATTAAATCTGAGATGCACAAATAAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGATGTGGATGTTGGAG | 2112 |
| Db | 2041 | AGCCAGAGGTTGGCCTGCTTTGGAGTCCTATTGTCGTGATGTGGATGTTGGAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTTAACCTCTCAA | 2172 |
| Db | 2101 | CACCTGAATAGGCAAGTCGAGGCAATGGAAAAGCTCATTTAACCTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAAACACAAAAGGTACAGATGAAGTTTATGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAGGAGAGGAAGGATGAAAACACAAAAGGTACAGATGAAGTTTATGTTGAGCAAATGAGG | 2220 |
| Qy | 2233 | CGACCAGATTTCATGGATGCCCTACAGGGCTTGCTCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAGATTTCATGGATGCCCTACAGGGCTTGCTCTCTAAACCCCTGTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGTCCTCTGCAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGGAACCCAGACATCATGTCAAGACTACTGTTTCAAGACAAATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGGAACCCAGACATCATGTCAAGACTACTGTTTCAAGACAAATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATATGCTAACACTTCAAATTATCGTATTATG | 2460 |
| Qy | 2473 | GAAAATATCTGCCAAATCAACGGCTTGATCTTCAAGTGTACCTTATGTTGCTGTCA | 2532 |
| Db | 2461 | GAAAATATCTGCCAAATCAACGGCTTGATCTTCAAGTGTACCTTATGTTGCTGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATGAGGTGGTGCAGAAATTCTCACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATGAGGTGGTGCAGAAATTCTCACACTATTATGCAAATT | 2580 |
| Qy | 2593 | CAGTGCAGGCGCTGAAAGGTGCACTGCAGTTCAACAGGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGCAGGCGCTGAAAGGTGCACTGCAGTTCAACAGGCCACACACTACATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATTATGATGCGACCTTGTGTTACAGTTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAAAGGAGAAATTATGATGCGACCTTGTGTTACAGTTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGTACCTTCATTTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACTGTGAGTACCTTCATTTGGGAAATTGGAGATCGTCACAAATAGTAAC | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGACAACCTGTTCATATAGATTGGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGACAACCTGTTCATATAGATTGGACACTTTGGATCAC | 2820 |

| | | | |
|----|------|---|------|
| Qy | 2833 | AAGAAGAAAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTGACACAGGATTC | 2892 |
| Db | 2821 | AAGAAGAAAAAAATTGGTTATAACGAGAACGTGTGCCATTGTTTGACACAGGATTC | 2880 |
| Qy | 2893 | TTAATAGTGTAGTAAAGGACCCAAAGATCCACAAAGACAAGAGAAATTGAGACGTTT | 2952 |
| Db | 2881 | TTAATAGTGTAGTAAAGGACCCAAAGATCCACAAAGACAAGAGAAATTGAGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTACTAGCTATTGCACAGCATGCCAATCTTCATAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTACTAGCTATTGCACAGCATGCCAATCTTCATAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACATCACAACTTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACATCACAACTTTGATGACATTGCA | 3060 |
| Qy | 3073 | TACATTCGAAAGACCCCTAGCCTTAGATAAAAAGTGGCAAGAGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTCGAAAGACCCCTAGCCTTAGATAAAAAGTGGCAAGAGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAATGAATGATGCCACATCATGGGCTGGACACAAAAATGGATTGGATCTTCAC | 3192 |
| Db | 3121 | AAACAATGAATGATGCCACATCATGGGCTGGACACAAAAATGGATTGGATCTTCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGCCATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3252 |
| Db | 3181 | ACAATTAAACAGCATGCCATTGAACTGAAAGATAACTGAGAAAATGAAAGCTCACTCTGGA | 3240 |

RESULT 11

US-11-443-428A-73309
; Sequence 73309, Application US/11443428A
; Patent No. 7745391
; GENERAL INFORMATION:
; APPLICANT: Mintz, Liat
; APPLICANT: Xie, Hanqing
; APPLICANT: Dahari, Dvir
; APPLICANT: Levanon, Erez
; APPLICANT: Freilich, Shiri
; APPLICANT: Beck, Nili
; APPLICANT: Zhu, Wei-Yong
; APPLICANT: Wasserman, Alon
; APPLICANT: Hermesh, Chen
; APPLICANT: Azar, Idit
; APPLICANT: Bernstein, Jeanne
; TITLE OF INVENTION: METHODS AND SYSTEMS USEFUL FOR ANNOTATING BIOMOLECULAR SEQUENCES
; FILE REFERENCE: 02/23929
; CURRENT APPLICATION NUMBER: US/11/443,428A
; CURRENT FILING DATE: 2006-05-31
; NUMBER OF SEQ ID NOS: 1034312
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 73309
; LENGTH: 4300
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (15)..(15)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (23)..(23)
; OTHER INFORMATION: n is a, c, g, or t
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; NAME/KEY: misc_feature
; LOCATION: (27)..(27)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (30)..(30)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (59)..(59)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (64)..(64)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc feature

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;
; LOCATION: (86)..(86)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (90)..(90)
; OTHER INFORMATION: n is a, c, g, or t
; FEATURE:
; NAME/KEY: misc_feature
; LOCATION: (354)..(354)
; OTHER INFORMATION: n is a, c, g, or t
US-11-443-428A-73309
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Query Match 94.2%; Score 3225.4; DB 11; Length 4300;
 Best Local Similarity 97.3%;
 Matches 3333; Conservative 0; Mismatches 37; Indels 56; Gaps 3;

| | | | |
|----|------|--|------|
| Qy | 1 | AGGATCAGAACAACTGCCCTCAAGACCATCATCAGGTGAACTGTGGGGCATCCACTTGTATG | 60 |
| Db | 172 | AGAACATCAGAACAACTGCCCTCAAGACCATCATCAGGTGAACTGTGGGGCATCCACTTGTATG | 231 |
| Qy | 61 | CCCCCAAGAACATCTAGTGGAAATTACTACCAAATGGAATGATAGTGAATTAGAACATGC | 120 |
| Db | 232 | CCCCCAAGAACATCTAGTGGAAATTACTACCAAATGGAATGATAGTGAATTAGAACATGC | 291 |
| Qy | 121 | CTCCGTGAGGCTACATTAGTAACATAAAAGCATGAACATTAAAGAACAGAAAATAC | 180 |
| Db | 292 | CTCCGTGAGGCTACATTAAACATAAAGCATGAACATTAAAGAACAGAAAATAC | 351 |
| Qy | 181 | CCTCTCCATCAACTCTTCAGATGAATCTCTTACATTTCGTAAAGTGTACCCAGAA | 240 |
| Db | 352 | CNCCNTCCATCAACTCTTCAGATGAATCTCTTACATTTCGTAAAGTGTACCCAGAA | 411 |
| Qy | 241 | GCAGAAAGGGAAGAATTTTGATGAAACAAGACGACTTGTGATCTCGGTTTTCAA | 300 |
| Db | 412 | GCAGAAAGGGAAGAATTTTGATGAAACAAGACGACTTGTGACCTTCGGTTTTCAA | 471 |
| Qy | 301 | CCATTTTAAAAGTAATTGAAACCAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 360 |
| Db | 472 | CCATTTTAAAAGTAATTGAAACCAGTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAA | 531 |
| Qy | 361 | ATTGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTTAAAGATCCTGAAGTA | 420 |
| Db | 532 | ATTGGTTTGCTATCGGCATGCCAGTGTGCAATTGATATGGTTAAAGATCCTGAAGTA | 591 |
| Qy | 421 | CAGGACTTCCGAAGAACATTCTTAATGTTGTAAAGAAGCTGTGGATCTAGGGATCTT | 480 |
| Db | 592 | CAGGACTTCCGAAGAACATTCTGAACGTTGTAAAGAAGCTGTGGATCTAGGGACCTC | 651 |
| Qy | 481 | AATTACCTCATAGTAGACCAATGTATGCTCATCGGCCACATGTAGAACATTCACCAAGAG | 540 |
| Db | 652 | AATTACCTCATAGTAGACCAATGTATGCTCATCGGCCACATGTAGAACATTCACCAAGAA | 711 |
| Qy | 541 | CTGCCAACAGCACATATAAAATTGGATAGAGGCCAATAATAGTGTGATTGGTA | 600 |
| Db | 712 | TTGCCAACAGCACATATAAAATTAGATAAAGGCCAATAATAGTGTGATCTGGTA | 771 |
| Qy | 601 | ATAGTTCTCCAATAATGACAAGCAGAGATACCTCTGAAACATCAACCATGACTGTG | 660 |
| Db | 772 | ATAGTTCTCCAATAATGACAAGCAGAGATACCTCTGAAACATCAACCATGACTGTG | 831 |
| Qy | 661 | CCAGAACAAAGTAATTGCTGAAGCAATCAGGAAAAAAACTAGAACGATGTGGTATCATCT | 720 |
| Db | 832 | CCAGAACAAAGTAATTGCTGAAGCAATCAGGAAAAAAACTCGAACGATGTGGTATCATCT | 891 |
| Qy | 721 | GAACATAAAAACTCTGTGTTTAAAGATACAGGCCAAGTACATTTAAAGTGTG | 780 |
| Db | 892 | GAACAACTAAAACCTCTGTGTTTAAAGATACAGGCCAAGTATTTAAAGTGTG | 951 |
| Qy | 781 | TGTGATGAAATCTCTAGAAAAATCTCTGTGACTCAGTATAAGTATATAAGAACGTG | 840 |
| Db | 952 | TGTGATGAAATCTCTAGA----- | 971 |
| Qy | 841 | ATAATGCTTGGGAGGATGCCCAATTGAAAGATGATGGCTAAAGAAAAGCCTTATTCTCAA | 900 |
| Db | 972 | -----GATGCCAATTGATGTTGATGGCTAAAGAAAAGCCTTATTCTCAA | 1017 |
| Qy | 901 | CTGCCAACATGGACTGTGTTTACATGCCATTTATCCAGGCCATTTCCACAGCTACACCA | 960 |
| Db | 1018 | CTGCCAACATGGACTGTGTTTACATGCCATTTATCCAGGCCATTTCCACAGCTACACCA | 1077 |
| Qy | 961 | TATATGAATGGAGAACATCTACAAAATCCCTGGGTTATAATAGAGCACTCAGAATA | 1020 |

| | | | |
|----|------|--|------|
| Db | 1078 | TATATGAATGGAGAACATCTACAAAATCCCTTGGGTATAAATAGTCACTCAGAATA | 1137 |
| Qy | 1021 | AAAATCTTGTGCAACCTACGTGAATCTAAATATTGAGACATTGACAAGAGTTATGTT | 1080 |
| Db | 1138 | AAAATCTTGTGCAACCTACGTGAATGTAAATATTGAGACATTGATAAGATCTATGTT | 1197 |
| Qy | 1081 | CGAACAGGTATCTACCATGGAGGAGAACCCCTATGTGACAATGTGAACACTCAAAGAGTA | 1140 |
| Db | 1198 | CGAACAGGTATCTACCATGGAGGAGAACCCCTATGTGACAATGTGAACACTCAAAGAGTA | 1257 |
| Qy | 1141 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATATACATTCTGATCTT | 1200 |
| Db | 1258 | CCTTGTCCAATCCCAGGTGGAATGAATGGCTGAATTATGATATATACATTCTGATCTT | 1317 |
| Qy | 1201 | CCTCGTGTGTCGACTTTGCCATTTCATTGCTCTGTTAAAGGCCGAAAGGGTGTCAA | 1260 |
| Db | 1318 | CCTCGTGTGTCGACTTTGCCATTTCATTGCTCTGTTAAAGGCCGAAAGGGTGTCAA | 1377 |
| Qy | 1261 | GAGAACACTGTCCATTGGCATGGGAATATAAACCTGTTGATACACAGACACTCTA | 1320 |
| Db | 1378 | GAGAACACTGTCCATTGGCATGGGAATATAAACCTGTTGATACACAGACACTCTA | 1437 |
| Qy | 1321 | GTATCTGAAAATGGCTTGATCTTGGCAGTACCTCATGGATTAGAAGATTGCTG | 1380 |
| Db | 1438 | GTATCTGAAAATGGCTTGATCTTGGCAGTACCTCATGGATTAGAAGATTGCTG | 1497 |
| Qy | 1381 | AACCTTATGGTGTACTGGATCAAATCCAAATAAGAACCTCATGCTAGAGTTGGAG | 1440 |
| Db | 1498 | AACCTTATGGTGTACTGGATCAAATCCAAATAAGAACCTCATGCTAGAGTTGGAG | 1557 |
| Qy | 1441 | TTTGACTIONGGTTCAGCAGGTGTTAAAGTCCAGATATGTCAGTATTGAGAGCATGCC | 1500 |
| Db | 1558 | TTTGACTIONGGTTCAGCAGGTGTTAAAGTCCAGATATGTCAGTATTGAGAGCATGCC | 1617 |
| Qy | 1501 | AATTGGCTGTATCCGAGAACAGGATTAGCTTACCTGGCAGGACTGAGTAACAGA | 1560 |
| Db | 1618 | AATTGGCTGTATCCGAGAACAGGATTAGCTTACCTGGCAGGACTGAGTAACAGA | 1677 |
| Qy | 1561 | CTAGCTAGAGACAATGAATTAAGGGAAATGACAAGAACAGCTCAAAGCAATTCTACA | 1620 |
| Db | 1678 | CTAGCTAGAGACAATGAATTAAGGGAAATGACAAGAACAGCTCAAAGCAATTCTACA | 1737 |
| Qy | 1621 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCATGGAGTCACAGACAC | 1680 |
| Db | 1738 | CGAGATCCTCTCTGAAATCACTGAGCAGGAGAAAGATTTCATGGAGTCACAGACAC | 1797 |
| Qy | 1681 | TATTGTGTAACTATCCCCAAATTCTACCCAAATGCTCTGTTAAATGGAATTCT | 1740 |
| Db | 1798 | TATTGTGTAACTATCCCCAAATTCTACCCAAATGCTCTGTTAAATGGAATTCT | 1857 |
| Qy | 1741 | AGAGATGAAGTAGCCCAGATGTATTGCTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1800 |
| Db | 1858 | AGAGATGAAGTAGCCCAGATGTATTGCTGGTAAAGATTGGCCTCCAATCAAACCTGAA | 1917 |
| Qy | 1801 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTTCGAGGTTTGTGTT | 1860 |
| Db | 1918 | CAGGCTATGGAACCTCTGGACTGTAATTACCCAGATCCTATGGTTCGAGGTTTGTGTT | 1977 |
| Qy | 1861 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTATTAAATTCAGCTAGTA | 1920 |
| Db | 1978 | CGGTGCTTGGAAAAATTTAACAGATGACAAACTTCTCAGTATTAAATTCAGCTAGTA | 2037 |
| Qy | 1921 | CAGGTCTAAATATGAAACAATTGGATAACTGCTTGTGAGATTACTGAAGAAA | 1980 |
| Db | 2038 | CAGGTCTAAATATGAAACAATTGGATAACTGCTTGTGAGATTACTGAAGAAA | 2097 |
| Qy | 1981 | GCATTGACTAATCAAAAGGATTGGGACTTTCTTTGGCATTTAAATCTGAGATGCAC | 2040 |
| Db | 2098 | GCATTGACTAATCAAAAGGATTGGGACTTTCTTTGGCATTTAAATCTGAGATGCAC | 2157 |
| Qy | 2041 | AATAAAACAGTAGGCCAGGGTTGGCCTGCTTGGAGTCCTATTGTCGTGATGGG | 2100 |
| Db | 2158 | AATAAAACAGTAGGCCAGGGTTGGCCTGCTTGGAGTCCTATTGTCGTGATGGG | 2217 |
| Qy | 2101 | ATGTATTGAGCACCTGAATAGGCAGGTGAGCTTGGCATTGAGCTTAACTTAAC | 2160 |
| Db | 2218 | ATGTATTGAGCACCTGAATAGGCAGGTGAGCTTGGCATTGAGCTTAACTTAAC | 2277 |
| Qy | 2161 | GACATCTCAACAGGAGGAGGATGAAACACAAAGGTACAGATGAAGTTTAGTT | 2220 |

| | | | |
|----|------|--|------|
| Db | 2278 | GACATTCTCAACAGGAGAAGAAGGATGAAACACAAAAGGTACAGATGAAGTTTTAGTT | 2337 |
| Qy | 2221 | GAGCAAATGAGGCCAACAGATTTCATGGATGCCCTACAGGGCTTGTGTCCTCTAAAC | 2280 |
| Db | 2338 | GAGCAAATGAGGCCAACAGATTTCATGGATGCTCACAGGGCTTGTGTCCTCTAAAC | 2397 |
| Qy | 2281 | CCTGCTCATCAACTAGGAAACCTCAGGCTTAAGAGTGTGCAATTATGTCTCTGCAAAA | 2340 |
| Db | 2398 | CCTGCTCATCAACTAGGAAACCTCAGGCTTGAAGAGTGTGCAATTATGTCTCTGCAAAA | 2457 |
| Qy | 2341 | AGGCCACTGTGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTAGAAC | 2400 |
| Db | 2458 | AGGCCACTGTGTTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTAGAAC | 2517 |
| Qy | 2401 | AATGAGATCATCTTAAAAATGGGATGATTACCGGCAAGATATGCTAACACTTAAATT | 2460 |
| Db | 2518 | AATGAGATCATCTTAAAAATGGGATGATTACCGGCAAGATATGCTAACACTTAAATT | 2577 |
| Qy | 2461 | ATTCTGTTATGAAAATCTGCAAAATCAAGGCTTGTGATCTTGAATGTTACCTTAT | 2520 |
| Db | 2578 | ATTCTGTTATGAAAATCTGCAAAATCAAGGCTTGTGATCTTGAATGTTACCTTAT | 2637 |
| Qy | 2521 | GGTTGCTCTGCAATCGGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2580 |
| Db | 2638 | GGTTGCTCTGCAATCGGTGACTGTGTTGGACTTATTGAGGTGGTGCAGAATTCTCACACT | 2697 |
| Qy | 2581 | ATTATGCAAAATCAGTGCAGGCGCTTGAAGGGTGCAGTCAACAGCCACACA | 2640 |
| Db | 2698 | ATTATGCAAAATCAGTGCAGGCGCTTGAAGGGTGCAGTCAACAGCCACACA | 2757 |
| Qy | 2641 | CTACATCAGTGCCTAAAGACAAGAACAAAGGAGAAATATATGATGCAGGCAATTGACCTG | 2700 |
| Db | 2758 | CTACATCAGTGCCTAAAGACAAGAACAAAGGAGAAATATATGATGCAGGCAATTGACCTG | 2817 |
| Qy | 2701 | TTTACACGTTCATGTCGTTGACTGTGAGCTACCTCATTTGGAAATTGGAGATCGT | 2760 |
| Db | 2818 | TTTACACGTTCATGTCGTTGACTGTGAGCTACCTCATTTGGAAATTGGAGATCGT | 2877 |
| Qy | 2761 | CACAATAGTAACATCATGGTAAAGACGATGGCAACTGTTCATATAGATTTGGACAC | 2820 |
| Db | 2878 | CACAATAGTAACATCATGGTAAAGACGATGGCAACTGTTCATATAGATTTGGACAC | 2937 |
| Qy | 2821 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACAGGAACAGTGTGCCATTGTTTG | 2880 |
| Db | 2938 | TTTTGGATCACAAGAAGAAAAATTGGTTATAACAGGAACAGTGTGCCATTGTTTG | 2997 |
| Qy | 2881 | ACACAGGATTCTTAATAGTAGTAAAGGGAGGCCAAGAATGCAACAAAGACAAGAGAA | 2940 |
| Db | 2998 | ACACAGGATTCTTAATAGTAGTAAAGGGAGGCCAAGAATGCAACAAAGACAAGAGAA | 3057 |
| Qy | 2941 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3000 |
| Db | 3058 | TTTGAGAGGTTTCAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACAGCATGCCAAT | 3117 |
| Qy | 3001 | CTCTTCATAAAATCTTCTCATGATGCTTGGCTCTGGATGCCAGAACTACAATTCTT | 3060 |
| Db | 3118 | CTCTTCATAAAATCTTCTCATGATGCTTGGCTCTGGATGCCAGAACTACAATTCTT | 3177 |
| Qy | 3061 | GATGACATTGACATATTGAAAGACCTCTAGGCTTAGATAAAACTGAGCAAGGGCTTG | 3120 |
| Db | 3178 | GATGACATTGACATATTGAAAGACCTCTAGGCTTAGATAAAACTGAGCAAGGGCTTG | 3237 |
| Qy | 3121 | GAGTATTCATGAAACAAATGAATGTCACATCATGGTGGCTGGACAAACAAAATGGAT | 3180 |
| Db | 3238 | GAGTATTCATGAAACAAATGAATGTCACATCATGGTGGCTGGACAAACAAAATGGAT | 3297 |
| Qy | 3181 | TGGATCTTCCACACAATTAAACGATGCTTGAACGCTTGAACGACTGAAAGATAACTGAGAA | 3239 |
| Db | 3298 | TGGATCTTCCACACAATTAAACGATGCTTGAACGACTGAAAGATAACTGAGAA | 3357 |
| Qy | 3240 | AGCTCACTCTGATTCCACACTGCACAGTTAAACTCTCAGCAGGCCAACAGCGATTGC | 3299 |
| Db | 3358 | AGCTCACTCTGATTCCACACTGCACAGTTAAACTCTCAGCAGGCCAACAGCGATTGC | 3417 |
| Qy | 3300 | ATAGGAATTGACAACTTCAATGAAACAGCATTAG-ATTTACAGCAAGAACAGAAATAAAATA | 3358 |
| Db | 3418 | ATAGGAATTGACAACTTCAATGAAACAGCATTAGAATTACAGCAAGAACAGAAATAAAATA | 3477 |
| Qy | 3359 | CTATATAATTAAATTAATGTAACCCAAACAGGGTTGTGATGAGCTTAAACTAGTTCAATT | 3418 |
| Db | 3478 | CTATATAATTAAATTAATGTAACCCAAACAGGGTTGTGATGAGCTTAAACTAGTTCAATT | 3537 |

Qy 3419 TCAAAA 3424
 |||||||
 Db 3538 TCAAAA 3543

RESULT 12
 US-08-162-081B-35
; Sequence 35, Application US/08162081B
; Patent No. 5824492
; GENERAL INFORMATION:
; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
; TITLE OF INVENTION: THEIR PREPARATION AND USE
; NUMBER OF SEQUENCES: 50
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Felife & Lynch
; STREET: 805 Third Avenue
; CITY: New York
; STATE: New York
; COUNTRY: USA
; ZIP: 10022
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/162,081B
; FILING DATE: February 7, 1994
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Pasqualini, Patricia A.
; REGISTRATION NUMBER: 34,894
; REFERENCE/DOCKET NUMBER: LUD 5256
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 688-9200
; TELEFAX: (212) 838-3884
; INFORMATION FOR SEQ ID NO: 35:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3207 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
 US-08-162-081B-35

Query Match 87.9%; Score 3008.6; DB 2; Length 3207;
 Best Local Similarity 96.1%;
 Matches 3083; Conservative 0; Mismatches 124; Indels 0; Gaps 0;

| | | |
|----|---|-----|
| Qy | 13 ATGCCCTCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGTATGCCCAAGAACATC | 72 |
| Db | 1 ATGCCCTCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGTATGCCCAAGAACATC | 60 |
| Qy | 73 CTAGTGGAAATGTTACTACCAAATGGATGATGTGACTTTAGAATGCTCCGTGAGGCT | 132 |
| Db | 61 CTAGTAAATGTTACTACCAAATGGATGATGTGACTTTAGAATGCTCCGTGAGGCT | 120 |
| Qy | 133 ACATTAAGTAACTATAACCATGAACTATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 192 |
| Db | 121 ACGTAAATACGATAAACGATGAACTATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 180 |
| Qy | 193 CTTCTTCAGATGAATCTCTTACATTTCGTAAGTGTACCCAAGAAGCAGAAAGGAA | 252 |
| Db | 181 CTTCTTCAGATGAATCTCTTACATTTCGTAAGTGTACCCAAGAAGCAGAAAGGAA | 240 |
| Qy | 253 GAATTTTTGATGAAACAAAGACGACTTTGTATCTCGCTTTCAACCCATTAAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAAAGACGACTTTGTGACCTTCGCTTTCAACCCATTAAAAA | 300 |
| Qy | 313 GTAATTGAACCAAGTAGGCAACCGTGAAAGAAAAGATCTCAATCGAGAAATGGTTTGCT | 372 |
| Db | 301 GTAATTGAACCAAGTAGGCAACCGTGAAAGAAAAGATCTCAATCGAGAAATGGTTTGCT | 360 |
| Qy | 373 ATCGGCATGCCAGTGTGCGAATTGATATGGTTAACGATCCTGAAGTACAGGACTCCGA | 432 |

| | | | |
|----|------|---|------|
| Db | 361 | ATCGGCATGCCAGTGTGAATTGATATGGTTAAAGATCCAGAAGTCAAGGACTTCGA | 420 |
| Qy | 433 | AGAAATATTCTTAATGTTGAAAGCTGTGGATCTTAGGGATCTTAATTCCACCTCAT | 492 |
| Db | 421 | AGAAATATTCTCAATGTTGAAAGAGCTGTGGATCTTAGGGATCTTAATTCCACCTCAT | 480 |
| Qy | 493 | AGTAGACCAATGTATGCTATCCGCCACATCTAGAACATCTCACCAAGAGCTGCCAACGAC | 552 |
| Db | 481 | AGTAGACCAATGTATGTTATCCTCCAATCTAGAACATCTCACCAAGAGCTGCCAACGAC | 540 |
| Qy | 553 | ATATATAATAATTGGATAAGAGGCCAATAATAGTGGTGATTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAATAATTGGATAAGGGCAATAATAGTGGTGATTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAAGTATACTCTGAAAATCACCATGACTGTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAACAGAAGTATACTCTGAAAATCACCATGACTGTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGATGTGTGCTATCATCTGAACAACTAAAA | 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTCGAAGATGTGTGCTATCATCTGAACAACTAAAA | 720 |
| Qy | 733 | CTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAGTGTGTGGATGTGATGAATAC | 792 |
| Db | 721 | CTCTGTGTTTAGAATATCAGGGCAAGTACATTTAAAGTGTGTGGATGTGATGAATAC | 780 |
| Qy | 793 | TTCCCTAGAAAAAAATATCCTCTGAGTCAGTATAAGTATAAGAACGCTGTATAATGCTGGG | 852 |
| Db | 781 | TTCCCTAGAAAAAAATATCCTCTGAGTCAGTATAAGTATAAGAACGCTGTATAATGCTGGG | 840 |
| Qy | 853 | AGGATGCCAATTGGAAGATGTGGCTAAAGAACGCCCTTATCTCAACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGATGCTGTGGCTAAAGAACGCCCTCATCTCAACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACATGCCATCTTACCCAGACGCTTCCACAGCTACACCATATATGATGG | 972 |
| Db | 901 | TGTTTACATGCCATCATTCACCCAGACGCTTCCACAGCTACGCCATATATGATGG | 960 |
| Qy | 973 | GAAACATCTACAAAATCCTTGGGTTAAATAGAGCACTCAGAATAAAATCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCTTGGGTTAAATAGTGCACCTCAGAATAAAATCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATTCTGAGACATTGACAAGATTATGTTGCAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTATGTGAATGTAATTCTGAGACATTGACAAGATTATGTTGCAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCTTATGTGACAATGTGAAACACTCAAAGAGTACCTTGTCCAAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCTTATGTGATAATGTGAAACACTCAAAGAGTACCTTGTCCAAAT | 1140 |
| Qy | 1153 | CCCAGGTGAATGAATGGCTGAATTATGATATACATCTCTGATCTCCCTGCTGCT | 1211 |
| Db | 1141 | CCCAGGTGAATGAATGGCTGAATTACGATATACATCTCTGATCTCCCTGCTGCT | 1200 |
| Qy | 1213 | CGACTTGGCTTCCATTGCTCTGTTAAAGGCCAACGGGTGCTAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGGCTTCCATTGCTCTGTTAAAGGCCAACGGGTGCTAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAAACTTGTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAAATAAAACTTGTGATTACACAGATACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGTTGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGTTGACTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAAAATAAGAACACTCCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAAAATAAGAACACTCCATGTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGGTAAAGTCCAGATATGTCAGTGAATTGAGAGCATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGGTAAAGTCCAGATATGTCAGTGAATTGAGAGCATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCGAGAGCAGGATTAGTATCCACCCAGACTGAGTAACAGACTGACTAGAGAC | 1572 |
| Db | 1501 | TCCCGTGAAGCAGGATTAGTATCCACCCATGAGACTGAGTAACAGACTGACTAGAGAC | 1560 |
| Qy | 1573 | ATGTTTACGGAAATTGCGAAATGCGAACTGAGCTGAGCTTGTGAGCTGAGCTG | 1632 |

| | | | |
|----|------|---|------|
| Db | 1561 | AATGAATTAAAGAGAAAATGATAAAGAACAGCTCCGAGCAATTGTACAGCAGACTCTCTA | 1620 |
| Qy | 1633 | TCTGAATTACTGAGCAGGAGAAAGATTTCATGGAGTCACAGACACTATTGTGTAAC | 1692 |
| Db | 1621 | TCTGAATTACTGAGCAGAGAAAGATTTCCTGAGGCCACAGACACTATTGTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGTTAATGAAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGTTAATGAAACTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCCAGATGTATTGCTTGTAAAAGATTGGCTTCCAATCAAACCTGAAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCTCAGATGTACTGCTTGTAAAAGATTGGCTTCCAATCAACGCGTGAACAGGCTATGGAG | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCTATGGTTGAGGTTTGTCTGGTCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGCAATTACCCAGATCTATGGTTGAGGTTTGTCTGGTCTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAAACTTCTCAGATTAACTCAGCTAGTACAGGCTCTAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAAACTTCTCAGTACCTAATTCAGCTAGTACAGGACTAAA | 1920 |
| Qy | 1933 | TATGAACAATATTGGATAACTGCTTGTGAGATTTTACTGAAAGAAAGCATGTAAT | 1992 |
| Db | 1921 | TATGAACAGTATTGGATAACCTGCTTGTGAGATTTTACTCAAAAAGCTTAAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTCTTGGCATTTAAATCTGAGATGCACATAAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATCGGGCACTTTCTTGGCATTTAAATCTGAGATGCACATAAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTTGGCCTGCTTTGGAGTCCTATTGTCGTGATGTGGAGTTTGAAAG | 2112 |
| Db | 2041 | AGTCAGAGGTTTGGCCTGCTTTGGAGTCCTATTGCGGTGATGTGGAGTTCTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAGTCAGGCAATGGAAAAGCTATTAACTTAACGTGACATTCTCAA | 2172 |
| Db | 2101 | CACCTTAATAGGCAGTCAGGCTATGGAAAAGCTATTAACTTGACTGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGTGAAACACAAAAGGTACAGATGAAAGTTTGTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAAGAGAAGAGGTGAAACACAAAAGGTACAGATGAAAGTTTGTGAGCAAATGCGG | 2220 |
| Qy | 2233 | CGACCAGATTCATGGATGCCCTACAGGGCTTGTCTCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAGATTCATGGATGCTCCAGGGCTTGTCTCTCTAAACCCCTGTCATCAG | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCTTAAAGAGTGTGCAATTATGCTCTCTGCAAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTGGGAAATCTCAGGCTTGAAGAGTGTGCAATTATGCTCTGCAAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGAGAACCCAGACATCATGTCAGAACATTACTTTTCAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTAAAAATGGGATGATTACGGCAAGATATGCTAACACTTAAATTATCGTATTATG | 2472 |
| Db | 2401 | TTAAAAATGGGATGATTACGGCAAGATATGCTAACCTTACGATTTGCTTATCGTATTATG | 2460 |
| Qy | 2473 | GAAAATATCTGCAAAATCAAGGTCTGATCTCGAATGTTACCTTATGGTGTCTGCA | 2532 |
| Db | 2461 | GAAAATATCTGCAAAATCAAGGTCTGATCTCGAATGTTACCTTATGGATGTCTGCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTGGACTTATGAGGTGGTGCAGAAATTCTCACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTGGACTTATCGAGGTGGTGCAGAAATTCTCACACTATTATGCAATT | 2580 |
| Qy | 2593 | CAGTGCACAGGGCGCTGAAAGGTGCACTGCAGTTCAACAGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGCACAGGGCGCTGAAAGGTGCACTGCAGTTAACAGCCACACACTCCATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATATGATGCGCCATTGACCTGTTACACCTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAAAGGGGAAATATGATGCGGCCATTGACCTGTTACACGATCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGTCACCTTCTATTGGGAATTGGAGATCGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATATTGTTGTCACCTTCTATTGGGAATTGGAGATCGTCACAAATAGTAAT | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGAGCACAACCTGTTCATATAGATTGGACACTTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGACGATGAGCACAACCTGTTCATATAGATTGGACACTTTTGGATCAC | 2820 |

| | | | |
|----|------|--|------|
| Qy | 2833 | AAGAAGAAAAAAATTGGTTAACGAGAACGTGTGCCATTGTTTGACACAGGATTC | 2892 |
| Db | 2821 | AAGAAGAAAAAAATTGGTTAACGAGAGCGCTGCCATTGTTTGACACAAGATTC | 2880 |
| Qy | 2893 | TTAATAGTGAATTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAATTGAGAGTTT | 2952 |
| Db | 2881 | TTAATAGTGAATTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAATTGAGAGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGCAGACGCATGCCAATCTCTCATTAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGCCAGGCATGCCAATCTCTCATTAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACATCCTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTTGGCTCTGGAATGCCAGAACATCCTTGATGATATTGCA | 3060 |
| Qy | 3073 | TACATTCGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTCGAAAGACCCTAGCCTTAGATAAAACTGAGCAAGGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGACATCATGGGGCTGGACAACAAAAATGGATTGGATCTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGACACCATGGGGCTGGACAACAAAAATGGATTGGATCTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGCATTGAACTGA | 3219 |
| Db | 3181 | ACAATTAAAGCAGCATGCTTGAACGTGA | 3207 |

RESULT 13

US-08-780-872-35

; Sequence 35, Application US/08780872

; Patent No. 5846824

GENERAL INFORMATION:

; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
; APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter
; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
; APPLICANT: Stefano; Gout, Ivan Tarasovitch
; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
; TITLE OF INVENTION: THEIR PREPARATION AND USE
; NUMBER OF SEQUENCES: 50
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Felife & Lynch
; STREET: 805 Third Avenue
; CITY: New York
; STATE: New York
; COUNTRY: USA
; ZIP: 10022

COMPUTER READABLE FORM:

; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
; COMPUTER: IBM PS/2
; OPERATING SYSTEM: PC-DOS
; SOFTWARE: Wordperfect

CURRENT APPLICATION DATA:

; APPLICATION NUMBER: US/08/780,872
; FILING DATE: 09-JAN-1997
; CLASSIFICATION: 435

PRIOR APPLICATION DATA:

; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993

ATTORNEY/AGENT INFORMATION:

; NAME: Pasqualini, Patricia A.
; REGISTRATION NUMBER: 34,894
; REFERENCE/DOCKET NUMBER: LUD 5256

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; TELEFAX: (212) 838-3884

INFORMATION FOR SEQ ID NO: 35:

; SEQUENCE CHARACTERISTICS:
; LENGTH: 3207 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear

US-08-780-872-35

Query Match 87.9%; Score 3008.6; DB 2; Length 3207;

Best Local Similarity 96.1%; Matches 3083; Conservative 0; Mismatches 124; Indels 0; Gaps 0;

| | | | |
|----|------|---|------|
| Qy | 13 | ATGCCCTCCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGATGCCCCAAGAAC | 72 |
| Db | 1 | ATGCCCTCCAAGACCATCATCAGGTGAACGTGGGGCATCCACTTGATGCCCCAAGAAC | 60 |
| Qy | 73 | CTAGTGGAACTGTTACTACCAAATGGAATGAGTAGTGACTTTAGAATGCCCTCGTAGGGCT | 132 |
| Db | 61 | CTAGTGGAACTGTTACTACCAAATGGAATGAGTAGTGACTTTAGAATGCCCTCGTAGGGCT | 120 |
| Qy | 133 | ACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 192 |
| Db | 121 | ACGTTAATAACGATAAACCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | 180 |
| Qy | 193 | CTTCTTCAGATGAACCTTCTACATTTCGTAAGTGTACCCAAGAAGCAGAAAAGGGAA | 252 |
| Db | 181 | CTTCTTCAGATGAACCTTCTACATTTCGTAAGTGTACCCAAGAAGCAGAAAAGGGAA | 240 |
| Qy | 253 | GAATTTTTGATGAAACAGACGACTTTGTGATCTCGCTTTCAACCAATTAAAAA | 312 |
| Db | 241 | GAATTTTTGATGAAACAGACGACTTTGTGACCTTCGCTTTCAACCAATTAAAAA | 300 |
| Qy | 313 | GTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAAAATTGGTTTGCT | 372 |
| Db | 301 | GTAATTGAACCACTAGGCAACCGTGAAGAAAAGATCCTCAATCGAGAAAATTGGTTTGCT | 360 |
| Qy | 373 | ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA | 432 |
| Db | 361 | ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA | 420 |
| Qy | 433 | AGAAATATTCTTAATGTTGTAAGAAGCTGTGGATCTAGGGATCTTAATTCACCTCAT | 492 |
| Db | 421 | AGAAATATTCTCAATGTTGTAAGAAGCTGTGGATCTAGGGATCTTAATTCACCTCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGCTATCCGCCACATGTAGAATCTCACCAGAGCTGCCAAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGTTATCTCCAAATGTAGAATCTCACCAGACTGCCAAAGCAC | 540 |
| Qy | 553 | ATATATAAATTGGATAGGCCAAATAATAGTGGTATTTGGTAATAGTTCTCA | 612 |
| Db | 541 | ATATATAAATTGGATAAGGCCAAATAATAGTGGTATTTGGTAATAGTTCTCA | 600 |
| Qy | 613 | AATAATGACAAGCAGAACTATCTGAAAATCAACCATGACTGTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATAATGACAACAGAACTATCTGAAAATCAACCATGACTGTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTCTATCATCTGAACAAATTAAA | 732 |
| Db | 661 | ATTGCTGAAGCAATCAGGAAAAAAACTCGAAGTATGTTCTATCATCTGAACAAACTAAA | 720 |
| Qy | 733 | CTCTGTGTTAGAATATCAGGCCAGTACATTAAAGTGTGTGGATGTGATGAAATAC | 792 |
| Db | 721 | CTCTGTGTTAGAATATCAGGCCAGTACATTAAAGTGTGTGGATGTGATGAAATAC | 780 |
| Qy | 793 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAAGCTGTATAATGCTGG | 852 |
| Db | 781 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATATAAGAAGCTGTATAATGCTGG | 840 |
| Qy | 853 | AGGATGCCCAATTGAGATGATGCCAAAGAACGCTTATTCTCAACTGCCAATGGAC | 912 |
| Db | 841 | AGGATGCCCAATTGAGATGATGCCAAAGAACGCTTATTCTCAACTGCCAATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATCTTACCGAGCCATTCCACAGCTACACCATATAATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATCTTACCGAGCCATTCCACAGCTACGCCATATAATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGGTTATAATAGGACTCAGAATAAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGGTTATAATAGGACTCAGAATAAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATCAGACATGACAAGATTATGTCGAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATATCAGACATGACAAGATTATGTCGAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCCCTATGTGACAACTGTGACACTCAAAGAGTACCTTGTCCAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCCCTATGTGACAACTGTGACACTCAAAGAGTACCTTGTCCAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGAATGGCTGAATTATGATATACATTCTGATCTCCCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGAATGGCTGAATTACGATATACATTCTGATCTCCCTCGTGTGCT | 1200 |

| | | | |
|----|------|--|------|
| Qy | 1213 | CGACTTGCCTTCATTTGCTCTGTTAAAGGCCGAAGGGTGTAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCATTTGCTCTGTTAAAGGCCGAAGGGTGTAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAATAATAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCATGGGAATAATAACTGTTGATTACACAGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCCAGTACCTCATGGACTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAAGAAACTCCATGCTTAGAGTTGGAGTTGACTGGTT | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAAGAAACTCCATGTTAGAGTTGGAGTTGACTGGTT | 1440 |
| Qy | 1453 | AGCAGTGTGTAAGATTCCAGATATGTCAGTGATTGAAGAGCATGCCATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGTGTAAGATTCCAGATATGTCAGTGATTGAAGAGCATGCCATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCAGAGCAGGATTAGCTATTCCACGCCAGGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCAGAGCAGGATTAGCTATTCCACGCCAGGACTGAGTAACAGACTAGCTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAAGGAAATGACAAGAACAGCTCAAAGCAATTCTACACGAGATCCTCTC | 1632 |
| Db | 1561 | AATGAATTAAAGGAAATGATAAAGAACAGCTCCAGCAATTGTACACGAGATCCTCTA | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAGATTCTATGGAGTCACAGACACTATTGTAAC | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAGATTCTGTGGAGGCCACAGACACTATTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGTTAAATGGAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTAAATGGAACTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCCAGATGTATTGCTTGGTAAAGATTGGCCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCTCAAGATGTACTGTTGGTAAAGATTGGCCTCCAATCAAACGCTGAACAGGCTATGGAG | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGTCAGGTTTGTCTGGCTTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTGCAATTACCCAGATCCTATGGTCAGGTTTGTCTGGCTTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAACCTTCTCAGTATTAAATTCTCAGTACAGGTCTAAAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAACCTTCTCAGTACCTAATTCTCAGTACAGGTACTAAAAA | 1920 |
| Qy | 1933 | TATGAACAAATTGGATAACTGCTTGAGATTTTACTGAAGAAACCTGACTTAAT | 1992 |
| Db | 1921 | TATGAACAGTATTGGATAACCTGCTTGAGATTTTACTCAAACCGTTAACTTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTCTTGGCATTTAAATCTCAGATGCACAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATCGGTCACTTTCTTGGCATTTAAATCTCAGATGCACAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTTGGCCTGCTTGGAGTCCTATTGTCGTGATGGGATGTTGAAG | 2112 |
| Db | 2041 | AGTCAGAGGTTTGGCCTGCTTGGAGTCCTATTGTCGTGATGGGATGTTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGAATGGAAAAGCTCATTAACCTAACTGACATTCTCAA | 2172 |
| Db | 2101 | CACCTTAATAGGCAAGTTGAGGCTATGGAAAAGCTCATTAACCTGACTGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGATGAAACACAAAAGTACAGATGAAGTTTAGTGAAGAAATGAGG | 2232 |
| Db | 2161 | CAAGAGAAGAAGGATGAAACACAAAAGTACAGATGAAGTTTAGTGAAGAAATGAGG | 2220 |
| Qy | 2233 | CGACCAAGATTCATGGATGCCCTACAGGGCTTGCTGTCCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAAGATTCATGGATGCCCTACAGGGCTTGCTGTCCTCTAAACCCCTGTCATCAA | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGGCCAAAGAGTGTGCAATTATGTCCTCTGCAAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTGGGAAATCTCAGGCCCTGAGAGTGTGCAATTATGTCCTCTGCAAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGGAGACCCAGACATCATGTCAGAGTTACTGTTGAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGGAGACCCAGACATCATGTCAGAACATTACTCTTCAAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGATGTTACGGCAAGATATGCTAACACTTCAAATTTCGATTATG | 2472 |

| | | | |
|----|------|---|------|
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATACTGCTAACCCCTCAGATTATTCGATTATG | 2460 |
| Qy | 2473 | GAAAATATCTGGAAATCAAGGTCTTGATCTCGAATGTTACCTTATGGTTGTCGTC | 2532 |
| Db | 2461 | GAAAATATCTGGAAATCAAGGTCTTGATCTCGAATGTTACCTTATGGATGTCGTC | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTTGGGACTTATGAGGTGTCGGAATTCTCACACTTATTCGAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTTGGGACTTATGAGGTGTCGGAATTCTCACACTTATTCGAAATT | 2580 |
| Qy | 2593 | CAGTGCAGAAGGGCGCTTGAAGGTGCACTGCAGTTAACGCCACACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTGTAAAGGAGGCCGTAAAGGTGCACTGCAGTTAACGCCACACACTCCATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAGGAGAAATATATGATGTCAGGCCATTGACCTGTTACACGTTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAAAGGGAAATATATGATGTCAGGCCATTGACCTGTTACACGATCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGCTACCTTCATTGGAAATTGGAGATGTCACAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATACTGTGAGCTACCTTCATTGGAAATTGGAGATGTCACAATAGTAAT | 2760 |
| Qy | 2773 | ATCATGGTGAAGACGATGGACAACCTGTTCATATAGATTGGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGATGATGGACAACCTGTTCATATAGATTGGACACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAATTGGTTATAAACGAGAACGCTGTCGCAATTGTTGACACAGGATTC | 2892 |
| Db | 2821 | AAGAAGAAAAATTGGTTATAAACGAGAACGCGTGCCTGTTGACACAGGATTC | 2880 |
| Qy | 2893 | TTAATAGTAGTTAGTAAGGAGGCCAAGAACGACAAAGAACAGGAAATTGGAGGTTT | 2952 |
| Db | 2881 | TTAATAGTAGTTAGTAAGGAGGCCAAGAACGACAAAGAACAGGAAATTGGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTTACAAGGCTTACTAGCTATTGACAGCATGCCAATCTCTCATAAAT | 3012 |
| Db | 2941 | CAGGAGATGTTACAAGGCTTACTAGCTATTGACAGCATGCCAATCTCTCATAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTGGCTCGGAATGCCAGAACTACAATTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTGGCTCGGAATGCCAGAACTGCAATCTTTGATGATATTGCA | 3060 |
| Qy | 3073 | TACATTGCAAAGACCCTAGGCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTGCAAAGACCCTAGGCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAAATGATGATGACATCATGGTGGCTGGACAACAAAATGGATTGGATCTCCAC | 3192 |
| Db | 3121 | AAACAAATGATGATGACACCATGGTGGCTGGACAACAAAATGGATTGGATCTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACGATGCTTGAACCTGAGCTTGGAGTATTCATG | 3219 |
| Db | 3181 | ACAATTAAACGATGCTTGAACCTGAGCTTGGAGTATTCATG | 3207 |

RESULT 14

RESULT 14
US-09-085-957-3

: Sequence 35. Application US/09085957

Sequence 35, App II
Patent No. 6274327

GENERAL INFORMATION:

APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu

APPLICANT: Bala; Waterfield, Michael Derek; Parker, Peter

APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,

; APPLICANT: Stefano; Gout, Ivan Tarasovitch

; TITLE OF INVENTION: POL

; TITLE OF INVENTION: THEIR
NUMBER OF SPECIMENS 52

**NUMBER OF SEQUENC
CORRESPONDENCE AB**

**CORRESPONDENCE AD
RESSESSE à...
RÉDACTEUR**

ADDRESSEE: F
STREET: 805

STREET: 805
CITY: New York

CITY: New York
STATE: New York

STATE: NEW YORK
COUNTRY: USA

COUNTRY: USA
ZIP: 10022

COMPUTER READABLE FORM:

MEDIUM TYPE: Disk

COMPUTER: IBM PS/2

OPERATING SYSTEM: PC-DOS

SOFTWARE: Wordperfect

; CURRENT APPLICATION DATA

```
;
; APPLICATION NUMBER: US/09/085,957
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 08/780,872
; FILING DATE: 09-JAN-1997
; APPLICATION NUMBER: 08/162,081
; FILING DATE: February 7, 1994
; APPLICATION NUMBER: PCT/GB93/00761
; FILING DATE: 13 April 1993
; ATTORNEY/AGENT INFORMATION:
; NAME: Pasqualini, Patricia A.
; REGISTRATION NUMBER: 34,894
; REFERENCE/DOCKET NUMBER: LUD 5256
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (212) 688-9200
; TELEFAX: (212) 838-3884
; INFORMATION FOR SEQ ID NO: 35:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 3207 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
US-09-085-957-35
```

| | Query Match | Score | DB | Length | Indels | Gaps |
|----|--|-------|--------|--------|--------|------|
| Qy | 13 ATGCTTCAAGACCATCATCAGGTGAACGTGTTGGGCATCCACTTGATGCCCAAGAACATC | 87.9% | 3008.6 | 3 | 3207 | 0 |
| Db | 1 ATGCTTCAAGACCATCATCAGGTGAACGTGTTGGGCATCCACTTGATGCCCAAGAACATC | 96.1% | | | | 60 |
| Qy | 73 CTAGTGGAAATGTTACTACCAAATGGATTAGTAGTGACTTTAGAATGCCCTCCGTGAGGCT | | | | 132 | |
| Db | 61 CTAGTAAATGTTACTACCAAATGGATTAGTAGTGACTTTAGAATGCCCTCCGTGAGGCT | | | | 120 | |
| Qy | 133 ACATTAGTAACATAAAGCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | | | | 192 | |
| Db | 121 ACGTTAAACGATAAACCATGAACATTAAAGAAGCAAGAAAATACCCCTCCATCAA | | | | 180 | |
| Qy | 193 CTTCTTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAAGAAGCAGAAAGGGAA | | | | 252 | |
| Db | 181 CTTCTTCAAGATGAATCTTCTACATTTCTGAAGTGTACCCAAGAAGCAGAAAGGGAA | | | | 240 | |
| Qy | 253 GAATTTTTGATGAAACAAAGACGACTTTGTATCTCGGTTTTCAACCATTAAAAA | | | | 312 | |
| Db | 241 GAATTTTTGATGAAACAAAGACGACTTTGTGACCTTCGGTTTTCAACCCTTTAAAAA | | | | 300 | |
| Qy | 313 GTAATGAAACAGTAGGCAACCGTGAAGAAAAGATCTCAATCGAGAAATGGTTTGCT | | | | 372 | |
| Db | 301 GTAATGAAACAGTAGGCAACCGTGAAGAAAAGATCTCAATCGAGAAATGGTTTGCT | | | | 360 | |
| Qy | 373 ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA | | | | 432 | |
| Db | 361 ATCGGCATGCCAGTGTGCAATTGATATGGTAAAGATCCTGAAGTACAGGACTTCCGA | | | | 420 | |
| Qy | 433 AGAAATATTCTTAATGTTGAAAGAACGCTGTTGATCTAGGATCTTAACTCACCTCAT | | | | 492 | |
| Db | 421 AGAAATATTCTCAATGTTGAAAGAACGCTGTTGATCTAGGATCTTAACTCACCTCAT | | | | 480 | |
| Qy | 493 AGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACAGAGCTGCCAAAGCAC | | | | 552 | |
| Db | 481 AGTAGAGCAATGTATGTTATCTCCAAATGTAGAATCTCACAGAGCTGCCAAAGCAC | | | | 540 | |
| Qy | 553 ATATATAATAATTGGATAGGCCAAATAATAGTGGTATGGTAAATAGTTCTCA | | | | 612 | |
| Db | 541 ATATATAATAATTGGATAAGGCCAAATAATAGTGGTATGGTAAATAGTTCTCA | | | | 600 | |
| Qy | 613 AATAATGACAAGCAGAAAGTATACTCTGAAAATCAACCATGACTGTGTCAGAACAGTA | | | | 672 | |
| Db | 601 AATAATGACAACAGAAAGTATACTCTGAAAATCAACCATGACTGTGTCAGAACAGTA | | | | 660 | |
| Qy | 673 ATTGCTGAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAAATAAAAA | | | | 732 | |
| Db | 661 ATTGCTGAAGCAATCAGGAAAAAAACTCGAAGTATGTTGCTATCATCTGAACAAACTAAAAA | | | | 720 | |
| Qy | 733 CTCTGTGTTAGAATATCAGGCAAGTACATTAAAGTGTGATGTGATGAATAC | | | | 792 | |
| Db | 721 CTCTGTGTTAGAATATCAGGCAAGTATATTAAAGTGTGATGTGATGAATAC | | | | 780 | |

| | | | |
|----|------|--|------|
| Qy | 793 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGTATAATGCTGGG | 852 |
| Db | 781 | TTCCTAGAAAAATATCCTCTGAGTCAGTATAAGTATAAGAAGCTGTATAATGCTGGG | 840 |
| Qy | 853 | ACGATGCCAATTGAAGATGATGCCAACGAAACCTTATTCTCAACTGCCAATCGAC | 912 |
| Db | 841 | ACGATGCCAATTGAATGCTGATGCCAACGAAACCTCTATTCTCAACTGCCAATCGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATTTCCAGACGCATTTCCACAGCTACCCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATATCCAGACGCATCCACAGCTACGCCATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCCTGGTTAAATAGAGCACTCAGAATAAAATTCTTG | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCCTGGTTAAATAGTCGCACTCAGAATAAAATTCTTG | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATTGAGACATTGACAAGATTATGTTGAAACAGGTATC | 1092 |
| Db | 1021 | GCAACCTATGTGAATGTAATATTGAGACATTGACAAGATTATGTTGAAACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCCATTGTGACAATGTGAAACACTCAAAGACTACCTGTTCAA | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCCATTGTGATAATGTGAAACACTCAAAGACTACCTGTTCAA | 1140 |
| Qy | 1153 | CCCAGGTGGAATTGCGTGAATTATGATATATACATTCTGTATCTCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATTGCGTGAATTACGATATATACATTCTGTATCTCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTGTAAAGCCGAAAGGGTGTAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTGTAAAGCCGAAAGGGTGTAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAATATAACCTGTTGATTACACGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCTGGGAATATAACCTGTTGATTACACGATACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGG | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCCAGTACCTCATGGACTAGAAGATTGCTGAACCCATTGG | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAAAGAAACTCCATGCTTAGAGTTGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAAAGAAACTCCATGTTAGACTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGTGTAAGTCCAGATATGTCAGTGATTGAAGACATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGTGTAAGTCCAGATATGTCAGTGATTGAAGACATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCCAGAACGAGGATTAGCTATCCACGCCAGGACTGAGTAACAGACTAGTAGAGAC | 1572 |
| Db | 1501 | TCCCCGAGAACGAGGATTAGCTATCCACGCCAGGACTGAGTAACAGACTAGTAGAGAC | 1560 |
| Qy | 1573 | AATGAATTAAGGAAAATGACAAGAACAGCTCAAAGCAATTCTACACGAGATCTCTC | 1632 |
| Db | 1561 | AATGAATTAAGGAAAATGATAAGAACACAGCTCCAGGAAATTGACACGAGATCTCTA | 1620 |
| Qy | 1633 | TCTGAAATCACTGAGCAGGAGAAAAGATTCTATGGAGTCACAGACACTATTGTAAC | 1692 |
| Db | 1621 | TCTGAAATCACTGAGCAGGAGAAAAGATTCTGTGGAGGCCACAGACACTATTGTAAC | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTTAATGAAATTCTAGAGATGAAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTTAATGAAACTCTAGAGATGAAAGTA | 1740 |
| Qy | 1753 | GCCCCAGATGATTGCTGAAAAGATTGCCCTCAATCACACCTGAACAGCTATGAA | 1812 |
| Db | 1741 | GCTCAGATGACTGCTGTTGAAAAGATTGCCCTCAATCACACCTGAACAGCTATGAA | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCCTATGGCTGAGGTTTGTGTTCGGTCTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTCCAATTACCCAGATCCTATGGCTGAGGTTTGTGTTCGGTCTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAAACTTCTCAGTATTAACTCAGCTACAGGCTCTAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAAACTTCTCAGTACCTAATTCTAGCTACTACAGGACTAAA | 1920 |
| Qy | 1933 | TATGAACAATATTGAGAACTTGTGAGATTTTACTGAAGAAAGCTTGTACTAAAT | 1992 |
| Db | 1921 | TATGAACAGTATTGAGAACTTGTGAGATTTTACTCAAAAAGCTTGTACTAAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGGCACTTTCTTGGCATTAAATCTGAGATGCAACAAAAACAGTT | 2052 |

| | | | |
|----|------|---|------|
| Db | 1981 | CAAAGGATCGGTCACTTTTCTTTGGCATTAAATCTGAGATGCCAATAAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTTGGCCTGCCTTGGAGTCCTATTGTCGTCATGTGGAGTGTATTGAAG | 2112 |
| Db | 2041 | AGTCAGAGGTTTGGCCTGCCTTGGAGTCCTATTGCGTCATGTGGAGTGTATTGAAG | 2100 |
| Qy | 2113 | CACCTGAATAGGCAAGTCGAGGAATGGAAAAGCTCATTAACCTAACGACATTCTCAA | 2172 |
| Db | 2101 | CACCTTAATAGGCAAGGTGAGGCTATGGAAAAGCTCATTAACCTGACTGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGGAGGAAGGTGAAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAAGAGAAGAAGGTGAAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGCGG | 2220 |
| Qy | 2233 | CGACCAAGATTTCATGGATGCCATCAGGGCTTGTGTCCTCTAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAAGATTTCATGGATGCTCCAGGGCTTCTGTCCTCTAACCCCTGTCATCAG | 2280 |
| Qy | 2293 | CTAGGAAACCTCAGCCTAAAGAGTGTGCAATTATGCTCTGCAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTGGGAATCTCAGGCTTGAGAGTGTGCAATTATGCTCTGCAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTTCAGAACATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGGAGAACCCAGACATCATGTCAGAACATTACTTTTCAGAACATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGATACTGCTAACACTTCAAATTATCGTATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATACTGCTAACCCCTTCAGATTATTCGCAATTATG | 2460 |
| Qy | 2473 | GAAAAATATCGCAAATCAAGGCTTGTGATCTTCAAGTGTACCTTATGTTGTCCTGTC | 2532 |
| Db | 2461 | GAAAAATATCGCAAATCAAGGCTTGTGATCTTCAAGTGTACCTTATGTTGTCCTGTC | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTTGGGACTATTGAGGTGGTGCAGAACACTTCAACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTTGGGACTATTGAGGTGGTGCAGAACACTTCAACACTATAATGCGAGATT | 2580 |
| Qy | 2593 | CAGTCGAAAGCGGGCTTGAAGGTGCACTGCAGTTCAACAGGCCACACTACATCAGTGG | 2652 |
| Db | 2581 | CAGTCGAAAGGAGGCTTGAAGGTGCACTGCAGTTAACGCCACACTCCATCAGTGG | 2640 |
| Qy | 2653 | CTCAAAGACAAGAACAAAAGGAGAAATATGATGCAGCCATTGACCTGTTACAGTTCA | 2712 |
| Db | 2641 | CTCAAAGACAAGAACAGGGGAAATATGATGCAGCCATTGACCTGTTACAGTTCA | 2700 |
| Qy | 2713 | TGTGCTGATACTGTGAGTCACTTCTATTGGAAATTGGAGATGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGATATTGTGTTGCCACCTTCATTGGAAATTGGAGATGTCACAAATAGTAAT | 2760 |
| Qy | 2773 | ATCATGGTAAAGACGATGGACAACGTGTTCATATAGATTGGACACTTTTGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGATGATGGACAACGTGTTCATATAGATTGGACACTTTTGATCAC | 2820 |
| Qy | 2833 | AAGAAGAAAAAATTGGTTAAACAGAGAACCTGTGCCCCATTGTTGACACAGGATTTC | 2892 |
| Db | 2821 | AAGAAGAAAAAATTGGTTAAACAGAGAACCTGTGCCCCATTGTTGACACAGGATTTC | 2880 |
| Qy | 2893 | TTAATAGTGTAGTAAGGAGGCCAAGAAATGCCAACAAAGACAAGGAATTGGAGGTTT | 2952 |
| Db | 2881 | TTAATAGTGTAGTAAGGAGGCCAAGAAATGCCAACAAAGACAAGGAATTGGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGCTTGCACACCATGCCAATCTCTCATAAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGCTTGCACACCATGCCAATCTCTCATAAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTGGCTCGGAATGCCAGAACACTACAATCTTGTGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTGGCTCGGAATGCCAGAACACTACAATCTTGTGACATTGCA | 3060 |
| Qy | 3073 | TACATTGCAAAGCCCTAGCCTTAGATAAAAAGTGGAGAAGGCTTGGAGTATTCTATG | 3132 |
| Db | 3061 | TACATTGCAAAGCCCTAGCCTTAGATAAAAAGTGGAGAAGGCTTGGAGTATTCTATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCCACATCATGGGCTCGAACACAAAATGGATGTCATTCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCCACACCATGGGCTGGACACACAAAATGGATGTCATTCAC | 3180 |
| Qy | 3193 | ACAATAAACAGCATGCACTGAACTGA 3219 | |

Db 3181 ACAATTAAGCAGCATGCTTGAACGTGA 3207

RESULT 15
 US-09-325-095-35
 ; Sequence 35 , Application US/09325095
 ; Patent No. 7422849
 ; GENERAL INFORMATION:
 ; APPLICANT: Hiles, Ian Donald; Fry, Michael John; Dhand, Ritu
 ; APPLICANT: Balai; Waterfield, Michael Derek; Parker, Peter
 ; APPLICANT: Joseph; Otsu, Masayuki; Panayotou, George; Volinia,
 ; APPLICANT: Stefano; Gout, Ivan Tarasovitch
 ; TITLE OF INVENTION: POLYPEPTIDES HAVING KINASE ACTIVITY,
 ; TITLE OF INVENTION: THEIR PREPARATION AND USE
 ; NUMBER OF SEQUENCES: 50
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Felte & Lynch
 ; STREET: 805 Third Avenue
 ; CITY: New York
 ; STATE: New York
 ; COUNTRY: USA
 ; ZIP: 10022
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
 ; COMPUTER: IBM PS/2
 ; OPERATING SYSTEM: PC-DOS
 ; SOFTWARE: Wordperfect
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/325,095
 ; FILING DATE:
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 09/085,957
 ; FILING DATE:
 ; APPLICATION NUMBER: 08/780,872
 ; FILING DATE: 09-JAN-1997
 ; APPLICATION NUMBER: 08/162,081
 ; FILING DATE: February 7, 1994
 ; APPLICATION NUMBER: PCT/GB93/00761
 ; FILING DATE: 13 April 1993
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Pasqualini, Patricia A.
 ; REGISTRATION NUMBER: 34,894
 ; REFERENCE/DOCKET NUMBER: LUD 5256
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (212) 688-9200
 ; TELEFAX: (212) 838-3884
 ; INFORMATION FOR SEQ ID NO: 35:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 3207 base pairs
 ; TYPE: nucleic acid
 ; STRANDEDNESS: single
 ; TOPOLOGY: linear
 US-09-325-095-35

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Query Match          87.9%; Score 3008.6; DB 8; Length 3207;
Best Local Similarity 96.1%;
Matches 3083; Conservative 0; Mismatches 124; Indels 0; Gaps 0;
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| | | |
|----|---|-----|
| Qy | 13 ATGCCCTCAAGACCATCATCAGGTGAACTGTGGGGCATCCACTTGATGCCCTCAAGAACATC | 72 |
| Db | 1 ATGCCCTCAAGACCATCATCAGGTGAACTGTGGGGCATCCACTTGATGCCCTCAAGAACATC | 60 |
| Qy | 73 CTAGTGGAAATGTTACTACCAAATGGATGAGTAGTGACTTTAGAATGCCCTCCGTGAGGCT | 132 |
| Db | 61 CTAGTAGAAATGTTACTACCAAATGGATGAGTAGTGACTTTAGAATGCCCTCCGTGAGGCT | 120 |
| Qy | 133 ACATTAGTAACATAAAGCATGAACTATTAAAGAAGCAAGAAAATACCCCTCTCCATCAA | 192 |
| Db | 121 ACGTAAATAACGATAAACCATGAACTATTAAAGAAGCAAGAAAATACCCCTCTCCATCAA | 180 |
| Qy | 193 CTTCTCAAGATGAATCTCTACATTTCTGAAGTGTACCCAAGAAGCAGAAAGGGAA | 252 |
| Db | 181 CTTCTCAAGATGAATCTCTACATTTCTGAAGTGTACCCAAGAAGCAGAAAGGGAA | 240 |
| Qy | 253 GAATTTTTGATGAAACAGACGACTTTGTGATCTCGGCTTTCAACCATTTTAAAA | 312 |
| Db | 241 GAATTTTTGATGAAACAGACGACTTTGTGACCTTCGCGTTTTCAACCATTTTAAAA | 300 |
| Qy | 313 GTAATGAAACAGTAGGCAACCGTGAAGAAAAGATCCTAACATCGAGAAAATGGTTTGCT | 372 |

| | | | |
|----|------|--|------|
| Db | 301 | GTAATTGAAACCGTAGGCCAACCGTGAAGAAAAGATCCTCAATCGAGAAATTGGTTTGCT | 360 |
| Qy | 373 | ATCGGCATGCCAGTGTGCAAATTGATATGGTAAAGAATCCTGAAGTCAGGACTTCGGA | 432 |
| Db | 361 | ATCGGCATGCCAGTGTGCAAATTGATATGGTAAAGAATCCTGAAGTCAGGACTTCGGA | 420 |
| Qy | 433 | AGAAATATTCTTAATGTTGAAAGAAGCTGTGGATCTAGGGATCTTAATTCCACCTCAT | 492 |
| Db | 421 | AGAAATATTCTCAATGTTGAAAGAAGCTGTGGATCTAGGGATCTTAATTCCACCTCAT | 480 |
| Qy | 493 | AGTAGAGCAATGTATGTCATCCGCCACATGTAGAATCTCACAGAGCTGCCAAAGCAC | 552 |
| Db | 481 | AGTAGAGCAATGTATGTTTATCTCCAATGTAGAATCTCACAGAATGCCAAAGCAC | 540 |
| Qy | 553 | ATATATAAATTGGATAGAGGCCAAATAATAGTGGTATTGGTAATAGTTCTCCA | 612 |
| Db | 541 | ATATATAAATTGGATAAAGGCCAAATAATAGTGGTATTGGTAATAGTTCTCCA | 600 |
| Qy | 613 | AATATGACAAGCAGAAGTATCTGAAAATCAACCATGACTGTGCCAGAACAGTA | 672 |
| Db | 601 | AATATGACAACAGAAGTATCTGAAAATCAACCATGACTGTGCCAGAACAGTA | 660 |
| Qy | 673 | ATTGCTGAAAGCAATCAGGAAAAAAACTAGAAGTATGTTGCTATCATCTGAACAATAAA | 732 |
| Db | 661 | ATTGCTGAAAGCAATCAGGAAAAAAACTCGAAGTATGTTGCTATCATCTGAACAATAAA | 720 |
| Qy | 733 | CTCTGTGTTAGAATATCAGGGCAAGTACATTAAAAGTGTGGATGTGATGAATAC | 792 |
| Db | 721 | CTCTGTGTTAGAATATCAGGGCAAGTATATTAAAAGTGTGGATGTGATGAATAC | 780 |
| Qy | 793 | TTCCTAGAAAAATATCCTCGAGTCAGTATAAGTATATAAGGCTGTATAATGCTTGG | 852 |
| Db | 781 | TTCCTAGAAAAATATCCTCGAGTCAGTATAAGTATATAAGGCTGTATAATGCTTGG | 840 |
| Qy | 853 | AGGATGCCAATTGAAAGATGTGCTAAAGAACCTTATCTCAACTGCCATGGAC | 912 |
| Db | 841 | AGGATGCCAATTGATGCTGTGCTAAAGAACCTTATCTCAACTGCCATGGAC | 900 |
| Qy | 913 | TGTTTACAATGCCATTTCCAGACGCATTTCCACAGCTACACCATATATGAATGGA | 972 |
| Db | 901 | TGTTTACAATGCCATATTTCCAGACGCATCTCCACAGCTACGCCATATGAATGGA | 960 |
| Qy | 973 | GAAACATCTACAAAATCCCTTGGGTTAAATAGAGCACTCAGAATAAAATTCTTGT | 1032 |
| Db | 961 | GAAACATCTACAAAATCCCTTGGGTTAAATAGTCGCACTCAGAATAAAATTCTTGT | 1020 |
| Qy | 1033 | GCAACCTACGTGAATCTAAATATCGAGACATTGCAAGATTATGTTGCCACAGGTATC | 1092 |
| Db | 1021 | GCAACCTACGTGAATCTAAATATCGAGACATTGCAAGATTATGTTGCCACAGGTATC | 1080 |
| Qy | 1093 | TACCATGGAGGAGAACCCATTGTGACCATGTGACACTCAAAGAGTACCTTGTCCAAT | 1152 |
| Db | 1081 | TACCATGGAGGAGAACCCATTGTGACATGTGACACTCAAAGAGTACCTTGTCCAAT | 1140 |
| Qy | 1153 | CCCAGGTGGAATGTTGCTGAATTATGATATATACATTCTGTATCTCTCGTGTGCT | 1212 |
| Db | 1141 | CCCAGGTGGAATGTTGCTGAATTACGATATATACATTCTGTATCTCTCGTGTGCT | 1200 |
| Qy | 1213 | CGACTTGCCTTCCATTGCTGTAAAGGCCGAAAGGGTGTCAAAGAGGAACACTGT | 1272 |
| Db | 1201 | CGACTTGCCTTCCATTGCTGTAAAGGCCGAAAGGGTGTCAAAGAGGAACACTGT | 1260 |
| Qy | 1273 | CCATTGGCATGGGAAATAAACTGTGTTGATTACACGACACTCTAGTATCTGGAAA | 1332 |
| Db | 1261 | CCATTGGCTGGGAAATAAACTGTGTTGATTACACGACACTCTAGTATCTGGAAA | 1320 |
| Qy | 1333 | ATGGCTTGAATCTTGGCAGTACCTCATGGATTAGAAGATTGCTGAACCCATTGGT | 1392 |
| Db | 1321 | ATGGCTTGAATCTTGGCAGTACCTCATGGACTAGAAGATTGCTGAACCCATTGGT | 1380 |
| Qy | 1393 | GTTACTGGATCAAATCCAATAAAGAACCTCATGCTTAGAGTTGGAGTTGACTGGTC | 1452 |
| Db | 1381 | GTTACTGGATCAAATCCAATAAAGAACCTCATGTTAGAGTTGGAGTTGACTGGTC | 1440 |
| Qy | 1453 | AGCAGTGTGTAAGACTCCAGATATGTCAGTGAATTGAGAACCATGCCAATTGGCTGTA | 1512 |
| Db | 1441 | AGCAGTGTGTAAGACTCCAGATATGTCAGTGAATTGAGAACCATGCCAATTGGCTGTA | 1500 |
| Qy | 1513 | TCCCCAGAACCGAGGATTAGCTATTCACCGCAGGACTGAGTAACAGACTAGCTAGAGAC | 1572 |
| Db | 1501 | TCCCCAGAACCGAGGATTAGCTATTCACCGCAGGACTGAGTAACAGACTAGCTAGAGAC | 1560 |

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| Qy | 1573 | AATGAATTAAAGGGAAAATGACAAAGAACAGCTCAAAGCAATTCTACAGAGATCCTCTC | 1632 |
| Db | 1561 | AATGAATTAAAGAGAAAATGATAAAGAACAGCTCCGGCAATTGTACACGGAGATCCTCTA | 1620 |
| Qy | 1633 | TCTGAATTACTGAGCAGGAGAAAGATTCTATGGACTCACAGACACTATTGTGTAACT | 1692 |
| Db | 1621 | TCTGAATTACTGAGCAGGAGAAAGATTCTGTGGACCACAGACACTATTGTGTAACT | 1680 |
| Qy | 1693 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTTAATGAAATTCTAGAGATGAAGTA | 1752 |
| Db | 1681 | ATCCCCGAAATTCTACCCAAATTGCTCTGCTGTTAATGAAACTCTAGAGATGAAGTA | 1740 |
| Qy | 1753 | GCCCGAGATGATTGCTGGTAAAGATTGGCTCCAATCAAACCTGAACAGGCTATGGAA | 1812 |
| Db | 1741 | GCTCAGATGACTGCTGGTAAAGATTGGCTCCAATCAAGGCTGAACAGGCTATGGAG | 1800 |
| Qy | 1813 | CTTCTGGACTGTAATTACCCAGATCTATGGTCAGGTTTGCTGTTGGCTTGGAA | 1872 |
| Db | 1801 | CTTCTGGACTCCAATTACCCAGATCTATGGTCAGGTTTGCTGTTGGCTTGGAA | 1860 |
| Qy | 1873 | AAATATTTAACAGATGACAAAATTCTCAGTTAATTCTAGCTACAGGTCTAAAA | 1932 |
| Db | 1861 | AAATATTTAACAGATGACAAAATTCTCAGTACCTAATTCTAGCTACAGGTACTAAA | 1920 |
| Qy | 1933 | TATGAACAAATTGGATAACTTGCCTTGAGATTTTACTGAAGAAAGCATGACTAAT | 1992 |
| Db | 1921 | TATGAACAGTATTGGATAACCTGCCTTGAGATTTTACTCAAAAAGCGTTAACTAAT | 1980 |
| Qy | 1993 | CAAAGGATTGGCACTTTTCTTGGCATTAAATCTGAGATGCACAAATAAACAGTT | 2052 |
| Db | 1981 | CAAAGGATCGGTCACTTTTCTTGGCATTAAATCTGAGATGCACAAATAAACAGTT | 2040 |
| Qy | 2053 | AGCCAGAGGTTTGGCTCTGCTTGGAGTCTATTGTCGTGCTATGTGGAGTGTATTGAG | 2112 |
| Db | 2041 | AGTCAGAGGTTTGGCTCTTGGAGTCTATTGTCGTGCTATGTGGAGTGTATTGAG | 2100 |
| Qy | 2113 | CACCTGAATTAGCAAGTCAGGCAATTGAAAAGCTCATTAACCTAACTGACATTCTCAA | 2172 |
| Db | 2101 | CACCTTAATTAGCAAGTTGAGGCTATTGAAAAGCTCATTAACCTGACTGACATTCTCAA | 2160 |
| Qy | 2173 | CAGGAGAGGAAGGTGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGAGG | 2232 |
| Db | 2161 | CAAGAGAAAGGTGAAACACAAAAGGTACAGATGAAGTTTAGTTGAGCAAATGCGG | 2220 |
| Qy | 2233 | CGACCAAGATTCTATGGATGCCCTACAGGGCTTGTCTCTCTAAACCCCTGTCATCAA | 2292 |
| Db | 2221 | CGACCAAGATTCTATGGATGCTCCAGGGCTTCTGTCTCTAAACCCCTGTCATCAG | 2280 |
| Qy | 2293 | CTAGGAACCTCAGCTAAAGACTGCGAATTATGTCCTCTGCAAAAGGCCACTGTGG | 2352 |
| Db | 2281 | CTGGGAATCTCAGGCTTGAAGACTGCGAATTATGTCCTCTGCAAAAGGCCACTGTGG | 2340 |
| Qy | 2353 | TTGAATTGGGAGAACCCAGACATCATGTCAGAGTTACTGTTCTGAGACAATGAGATCATC | 2412 |
| Db | 2341 | TTGAATTGGGAGAACCCAGACATCATGTCAGAAATTACTGTTCTGAGACAATGAGATCATC | 2400 |
| Qy | 2413 | TTTAAAAATGGGGATGATTACGGCAAGATACTGCTAACACTTCAAATTATGCTATTATG | 2472 |
| Db | 2401 | TTTAAAAATGGGGATGATTACGGCAAGATACTGCTAACCTTCTCAGATTATTCGCAATTATG | 2460 |
| Qy | 2473 | GAAAATATCTGCCAAATCAAGGCTTGTATCTCGAATGTTACCTTATGTTGCTGTCA | 2532 |
| Db | 2461 | GAAAATATCTGCCAAATCAAGGCTTGTATCTCGAATGTTACCTTATGTTGCTGTCA | 2520 |
| Qy | 2533 | ATCGGTGACTGTGTTGGACTTATGAGGTGGCTGCGAAATTCTCACACTATTATGCAAATT | 2592 |
| Db | 2521 | ATCGGTGACTGTGTTGGACTTATCGAGGTGGCTGAGAAATTCTCACACTATAATGCGAGATT | 2580 |
| Qy | 2593 | CAGTGCACAGGGCGCTTGAAGGTGCACTGCAAGTTCAACAGGCCACACACTACATCGTGG | 2652 |
| Db | 2581 | CAGTGTAAAGGAGGCGTAAAGGTGCACTGCAAGTTCAACAGGCCACACACTCCATCGTGG | 2640 |
| Qy | 2653 | CTCAAGACAAGAACAAAAGGAGAAATATGATGCGACCTGTTACAGCTCA | 2712 |
| Db | 2641 | CTCAAGACAAGAACAGGGAAAATATGATGCGCCATGCGATTGTTACAGCTCA | 2700 |
| Qy | 2713 | TGTGCTGGATACTGTGAGTACCTCTATTGGAAATTGGAGATGTCACAAATAGTAAC | 2772 |
| Db | 2701 | TGTGCTGGATATTGTTGCGACCTCTATTGGAAATTGGAGATGTCACAAATAGTAAT | 2760 |

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| Qy | 2773 | ATCATGGTGAAGACGATGGACAACCTGGTTCATATAGATTGGACACTTTGGATCAC | 2832 |
| Db | 2761 | ATCATGGTAAAGATGATGGACAACCTGGTTCATATAGATTGGACACTTTGGATCAC | 2820 |
| Qy | 2833 | AAGANGAAAAAATTGGTTATAACGAGAACGTGTGCCATTGGTTTGACACAGGATTTC | 2892 |
| Db | 2821 | AAGANGAAAAAATTGGTTATAACGAGAACGTGTGCCATTGGTTTGACACAGGATTTC | 2880 |
| Qy | 2893 | TTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAATTGAGAGGTTT | 2952 |
| Db | 2881 | TTAATAGTGTAGTAAAGGAGCCCAGAACATGCACAAAGACAAGAGAATTGAGAGGTTT | 2940 |
| Qy | 2953 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGACACGCGATGCCAATCTTCATAAAAT | 3012 |
| Db | 2941 | CAGGAGATGTGTTACAAGGCTTATCTAGCTATTGCGCAGCATGCCAATCTTCATAAAAT | 3000 |
| Qy | 3013 | CTTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACATACAATCTTTGATGACATTGCA | 3072 |
| Db | 3001 | CTTTCTCAATGATGCTTGGCTCTGGAAATGCCAGAACATGCAACTCTTTGATGATATTGCA | 3060 |
| Qy | 3073 | TACATTGAAAGACCCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3132 |
| Db | 3061 | TACATTGAAAGACCCCTAGCCTTAGATAAAACTGAGCAAGAGGCTTGGAGTATTCATG | 3120 |
| Qy | 3133 | AAACAAATGAATGATGCACATCATGGTGGCTGGACAACAAAAATGGATTGGATCTTCCAC | 3192 |
| Db | 3121 | AAACAAATGAATGATGCACACCATGGTGGCTGGACAACAAAAATGGATTGGATCTTCCAC | 3180 |
| Qy | 3193 | ACAATTAAACAGCATGCATTGAACTGA 3219 | |
| Db | 3181 | ACAATTAAAGCAGCATGCTTGAACACTGA 3207 | |

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